Cedar Crest College
Psychology 212: Statistical Methods
4 Credits
Spring, 2010

Class Tuesdays and Thursdays, 1:00 – 2:15 (BHA 2)
Recitation Fridays, 10:00 – 10:50 (CUR 208)
Dr. James Scepansky

O**ffice:**	118 Curtis Hall
P**hone:**	(610) 606-4666, Ext. 3424
E**mail:**	jascepan@cedarcrest.edu
O**ffice** H**ours:**	TWR, 10:00 – 11:00, Or By Appointment

Tutor: Gary Moll (Professional Tutor)
Contact : (CUR 113; x 3485; glmoll@cedarcrest.edu) MTWR, 9 a.m. – 7 p.m., F 10 a.m. – 4 p.m.

Required Texts and Materials:

- **Regular Access to eCollege**. You should automatically be enrolled in eCollege if you are on the roster for this class at the beginning of the semester (if you register late, you need to contact the Registrar immediately). eCollege will enable me to send/receive emails to/from everyone in the class who has an email account, and I can also post handouts or assignments to the course space which you can then print. You will be able to track your scores on assignments across the semester, so that you should always have a sense of your current grade. College policy now mandates that your "@cedarcrest.edu" account must be used (NOT hotmail, yahoo, etc.) for all official communication. It is your responsibility to regularly check your email (At least a couple times per day) from your own computer, a library computer, or from any computer that has email access--I WILL NOT ACCEPT "I DIDN'T GET IT" as an excuse for missing class, missing a deadline or submitting incomplete work. Points will be deducted under each of these circumstances.

- **Use of Turning Point Clicker**. This class will utilize the Turning Point Clicker system. Each student must purchase a clicker at the bookstore and bring it to class each day. The clicker will be used to track participation and assess student comprehension throughout the semester. Once a student purchases a clicker, it should work for all current and future classes utilizing the Turning Point Clicker system (i.e., you only need to buy one clicker). Once you purchase your clicker, you will need to electronically register it for use in this class, as well as any other classes which use the Turning Point Clicker system. Registration is done in the "Current Students" tab in My Cedar Crest. You need to click the "Classroom Response Tracker" link and follow the directions provided. You must type in the clicker ID that is on the back of your clicker device EXACTLY AS IT APPEARS.

- **Required:** Holcomb, Z. (2007). *Interpreting basic statistics* (5th Ed.). Los Angeles, CA: Pyrczak Publishing

- **Required:** A calculator capable of squares and square roots is required for use at home and during class sessions. It is very important that you bring it to <u>each and every class</u>. We will be working on problems in class almost every day, and each student is expected to participate in these exercises. <u>Failure to bring a calculator will count against your class participation grade (see below)</u>. **NOTE: A calculator will be provided for you on test days—you will not be permitted to use your own calculators for exams.**
- **Regular Access to Publication Manual of the American Psychological Association (6th Ed.).** All experimental write-ups will follow strict APA style guidelines. This book is also required in PSY 365/366 (Senior Year Research), and is especially valuable for those contemplating graduate school.

<u>**Course Description**</u>: A continuation of the exploration of the scientific field of psychology research and data analysis. Topics include theory, computation, and application of various descriptive and inferential (nonparametric and parametric) statistics. The SPSS computer package will be used for each data analysis method, and data analyses will be tied to specific research designs and mini-field experiments. This course MUST be taken immediately after PSY 211. Students MUST receive a passing grade in PSY 211 in order to enroll in this class. This class is for declared Psychology Majors only.

<u>**Course Objectives**</u>: To provide an introduction into the scientific field of research and data analysis that is required for working in and exploring any area of psychology. After successful completion of this course, you will

1. demonstrate the ability to conduct various statistical tests, both by hand and using SPSS
2. demonstrate the ability to make and write appropriate interpretations based on data analyses
3. demonstrate the ability to present data graphically, by hand, and using SPSS
4. demonstrate the ability to read results and interpret data and analyses presented in professional publications

<u>**Teaching Format**</u>: The course will consist of some lecture and discussion, but will predominantly involve demonstration of statistical procedures and opportunity for students to practice those procedures. You should read any assigned material **before** coming to class, so that you can be an active participant and keep current with the material.

<u>**Statement on Disability Accommodations**</u>: Students with documented disabilities who may need academic accommodations should discuss these needs with me during the first two weeks of class. Students with disabilities who wish to request accommodations should contact the Academic Services Center. According to college policy, documentation must be provided to me before accommodations will be made.

<u>**Psychology Department Attendance Policy**</u>: The Psychology Department is committed to the principle that regular and punctual class attendance is essential to the students' optimum learning and successful academic achievement. Regular class attendance is a student obligation, and students are responsible for all work, tests and written assignments. Therefore, students are expected to be present for all class sessions. The Psychology Department's attendance policy recognizes that there will be times when attendance at class is not possible. You may think of the policy as being similar to the type used in the corporate world where each employee is given a certain number of "personal/sick days." Based on the number of regularly scheduled class meetings, you will be allowed a certain number of absences (see below) with no consequences, no questions asked. In other words, there is no distinction between excused and unexcused absences. You are of course responsible for anything covered during those missed classes, and for submitting assignments on time, regardless of whether or not you attend. Beyond the allowable number of absences, there are consequences that will adversely impact your grade, much as missing too many days of work can adversely impact your employment status. Above all else, you should carefully consider each decision to not attend class, as once your allotted absences have been used, they are gone. *<u>It is important that students arrive for class on time. Late arrivals are very distracting, not only to the instructor, but also to fellow students. Repeated late arrivals are not acceptable and will be addressed on an</u>*

individual basis. It is each student's responsibility to understand this policy and to keep track of absences throughout the semester.

> **Application to this Class**: Formal attendance will be taken during all class sessions. This class meets twice per week (28 class meetings). You may miss ***3 classes*** without penalty. If you miss ***4 classes***, your final grade (cumulative percentage of points) will be lowered by 5%. That means that if you have earned 84% of the available points in the class, which is a B grade, you would be lowered to 79%, which is a C+. Likewise, if you have earned 77% of the points available, the penalty would take you down to 72%, which is a C-. As a reminder, a C grade (73%) is required in all Psychology courses. If you miss ***5 classes***, you will be docked an additional 5% points off of your final grade (for a total of 10%). If you miss ***6 classes***, you will receive a failing grade for the course. If you miss six classes, you have missed approximately 25% of the class meetings.

Furthermore, you alone are responsible for all assignments and material covered in class whether or not you attend. Why is attendance <u>SO</u> important?? We will cover a rather large number of statistical procedures and operations and class time will be used for introduction, demonstration, application, and practice. Further, the skills you learn at one point in the semester will be used as building blocks for more advanced skills that come later. In short, you will be at a great disadvantage if you are not able to attend class. If you do miss a class, you are encouraged to borrow the lecture notes from a classmate, and then I will be happy to sit down and meet with you if there are topics/concepts/procedures that give you trouble. I have created PowerPoint handouts that serve as an outline for what I will cover in class on a topic by topic basis. I will provide these outlines, in advance, as electronic files that can be downloaded and printed <u>before coming to class</u>. The outlines will provide definitions and key formulas so that you do not have to spend the majority of class time writing unnecessarily—more time to listen, process, and most importantly, work on problems. However, the PowerPoints are incomplete; they do not contain everything I will be discussing in class. In other words, the PowerPoints should be treated as a starting point, NOT as "all you need to know." You should take notes during class time to add to what is contained in the PowerPoints, paying particular attention to examples used to illustrate the concepts that are covered. From my experience, given the hands-on nature of research methodology and statistics, failure to attend even a single class can strongly hinder performance. **It is up to you** to obtain handouts, notes, or any materials that you have missed.

<u>**Lab/Recitation Session**</u>: Due to the he hands-on and applied nature of this course, a recitation session has been included similar to the one attached to PSY 211. The sessions will serve to aid students in understanding the lecture material and may consist of some combination of review and extra practice, assistance with experiment write-ups, and/or a question-and-answer period for homework assignments. The sessions will also be used to introduce procedures involving SPSS and will therefore take place in a lab (CUR 208) where students can practice what they learn and prepare for assignments utilizing SPSS. In short, the session will provide structure to the lab component of the course and enable you to receive focused assistance on content that often warrants additional instruction for many students. <u>Attendance at recitation sessions is mandatory</u>. You may miss **ONE** scheduled recitation session without penalty. All subsequent absences from recitation will result in a **FIVE (5)** point deduction from your final class participation grade (see below). **Important**: As with lecture, you are responsible for material covered/discussed/worked on during recitation even if you are absent.

<u>**Academic Honesty and Classroom Protocol**</u>: All Cedar Crest College students are expected to be familiar with and fully supportive of the college's policy regarding the Honor Code and academic integrity. For any instances of dishonesty (e.g., cheating on tests, copying other students' work, plagiarism, etc.), appropriate penalties will be applied. See the Student Guide for more information regarding the enforcement of these policies.

- <u>**Plagiarism:**</u> Plagiarism is the act of presenting the ideas, words or other intellectual property of another as one's own. The use of other people's work must be properly acknowledged and referenced in all written material. The use of material without acknowledgement is an offense.

- **Cheating:** Bear in mind that allowing another to copy one's work is an academic offense just as is copying from someone. Furthermore, submitting the same paper for two courses without arrangement is also an academic offense.
- **Important**: It is each student's responsibility to not only abide by, but also uphold the Honor Code. As such, any instances of dishonesty should be brought to my attention immediately. In addition, appropriate classroom behavior is defined and guided by complete protection for the rights of all students and faculty to a courteous, respectful classroom environment. That environment is free from distractions such as late arrivals, early departures, inappropriate conversations, cell phone use and any other behaviors that might disrupt instruction and/or compromise other students' access to their Cedar Crest College education. Behavior that is deemed disruptive or disrespectful will result in penalties at the discretion of the instructor. To that end, here are a couple of things to keep in mind:
- You may eat in class, so long as you do so with courtesy to the class in terms of manners and noise level.
- Turn your cell phones to VIBRATE/SILENT **immediately upon entering the classroom**. If you are expecting an URGENT call, notify me ahead of time, situate yourself near the exit, and quietly exit the room before answering.
- Try to get a good night sleep before coming to class. Falling asleep in class is very distracting and disrespectful; **if you are asleep, technically, you are absent and will be treated as such (See Attendance Policy).**
- Entering and exiting the classroom during lecture/discussion is very distracting to both me and your classmates. **To that end, please arrive on time. I usually take attendance during the first five minutes of class. While I understand that a student may be late to class for reasons beyond their control, this should not be a recurrent problem. Multiple times being late to class may be treated as absences or result in points being deducted from a student's class participation grade. Further, this class is only 75 minutes long; please refrain from leaving the classroom until class is over.**

- **Conducive Classroom Environment:** When you come to class, it is expected that you are there to learn, and contribute to the learning of others, through participation. This is a class that students come to with varying degrees of experience and comfort. For that reason, it is crucial that the class environment is conducive to learning. When practice problems are assigned, it is expected that each student will work on the problems at their desk individually. As instructor, I need to know when there are problems or when people are not clear on how or why to perform a statistical procedure; if you have questions, please ask me for assistance, rather than engaging in conversation with other students. This is how I can determine if everyone is on the same page! Failure to work on the problems, sleeping, outside reading, or engaging in any other behaviors that detract from the learning environment will result in points being deducted from your grade as I see fit. In particular, use of computers at times and in manners other than those authorized (checking email, playing games, web surfing, using printers) is very distracting to students who are trying to concentrate and will therefore NOT be tolerated.

Assessment: Altogether, there will be three (3) exams (See course schedule below), each worth 100 points, which are designed to test your ability to conduct specific statistical tests, make appropriate interpretations, present data graphically, and read interpretations in published research (**Objectives 1 – 4**). Exams will consist of an In Class Component (mostly multiple-choice, short answer) and a Take Home component (generally computational and SPSS problems); exams are designed to measure your knowledge, understanding, and application of course material. As a word of caution, issues in research methodology and statistics early in the semester will serve as building blocks for concepts covered later in the semester; in other words, material in this course is cumulative in nature, and to an extent, so will be the exams (I will have more to say when the exams are approaching). The third exam will be given during Final Exam Week, according to the College-wide schedule which is/will be available on the Registrar's Homepage. Exams must be taken during the scheduled time period. Make-up exams will NOT be given without written documentation from the Dean of Student's Office of an excused absence according to college policy (i.e., serious illness that results in hospitalization or physician-mandated bed-rest, college-sponsored event, death of immediate family member)—NO

EXCEPTIONS. Advanced notice should be given whenever feasible. Documentation must be presented and the make-up exam scheduled as soon as possible.

SPSS Experimental Write-ups: It is important that students of psychology develop skills in the use of statistical software packages, as this is in reality the way that most statistical procedures are performed by psychologists doing research. **This class satisfies the Cedar Crest College-wide Technology requirement, which all students must complete in order to graduate.** Throughout the semester, there will be demonstrations for how to use SPSS (Statistical Package for the Social Sciences) to conduct the statistical procedures you have learned to do by hand, and you will have several opportunities to practice with SPSS on smaller assignments (See Homework Below). In PSY 211 you participated in lab "experiments" demonstrating different research designs (e.g., Anagrams, Sexual Harassment) and wrote APA-format Introduction and/or Method sections based on those experiments. This semester, you will complete the manuscripts by writing Results and/or brief Discussion sections based on analyses conducted on data from those same studies. Working with the raw data, which I will provide in the form of an MS Excel spreadsheet, you will enter the data into SPSS and perform the appropriate statistical procedures for each experiment; you will then write a partial APA format manuscript (Results or Results and Discussion sections, along with supplemental figures) to support those analyses (**Objectives 1 – 3**). The papers must conform to the Publication Manual of the American Psychological Association (5th Ed.). Specific due-dates as well as detailed instructions will be provided for each experimental write-up. Points will be deducted for late assignments. Each paper is worth a maximum of 25 points.

Class Participation: Class participation will be factored into your grade in this class in two ways. Specifically, the balance of class time will be spent practicing statistical procedures learned in class. It is expected that you will be working on those problems at the appropriate times, and that you will be prepared to do so (with a calculator or anything else that is announced as necessary). Furthermore, during each class period, clickers will be used to assess students' comprehension and progress in learning the statistical procedures covered in class. Each class session will be worth 5 points (regardless of the number of clicker questions asked, or how many problems are worked on). If you are in class, and you have your calculator and are clearly working on the problems assigned, and you are properly using your clicker to answer the questions, you will get all 5 of that day's points. **If you 1) are absent, 2) do not register your clicker correctly, or 3) forget your clicker or calculator, you will not receive the points for that day's class, and those points MAY NOT BE MADE UP.** Altogether, your Homework and Class Participation will be worth up to a maximum of 50 points and your score will be based on the percentage of points you are out of the total possible points available. NOTE: It is absolutely important that you register your clicker and bring it (and your calculator) to each and every class (and recitation) session.

Homework: Statistics is a skill. To be able to perform any skill proficiently, you must practice. In this course, you will not be able to walk into an exam and expect to do very well without doing several repetitions of each problem type ahead of time. In any case, homework will be assigned on a nightly basis, and it will count towards your grade. Some homework assignments will be in the form of handouts distributed in class or come directly from the class workbook. Others will be placed on eCollege as electronic files. There are two types of homework assignments you will complete on a recurring basis.

Statistical Reading Comprehension: The *Interpreting Basic Statistics* workbook presents excerpts from actual journal articles, specifically Results sections and accompanying figures. You will read the excerpts for selected articles (See below) and then answer the 6 – 10 subsequent "PART A: Factual Questions;" these questions can be answered either by referring to the excerpt directly, examining the accompanying tables and figures, and/or by simple calculations based on the data in those tables/figures (**Objective 4**). Each IBS exercise MUST BE TYPED, and is worth a maximum of 3 points, graded using the following scale:

0 – 2 incorrect answers = 3 pts
3 – 4 incorrect answers = 2 pts.

5+ incorrect answers = 1 pt. (assuming entire assignment is attempted)
Incomplete, late, not typed, not submitted = 0 pts.

Computational Problem Sets: On a nightly basis, you will be asked to conduct analyses on problem sets for each type of statistical analysis you will be tested on (**Objectives 1 – 3**). The majority of the analyses must be completed using a calculator, done by hand. Some assignments may require analysis of a small data set using SPSS in an on-campus computer lab. In all cases, any interpretations (i.e., "write-ups") that are required for homework problems MUST be typed. Each assignment will be graded on a 5 point scale based on completeness, neatness and correctness of answers. The majority of the points will be based on effort, but incorrect answers will lead to deductions.

Important: To be most effective, feedback for learning new skills needs to be immediate, so I will go over homework (provide answers and answer your questions) during the first few minutes of the class period when the assignment is collected. This only helps if you can compare your own work against the answer sheet I provide. For this reason, I strongly recommend photocopying your completed assignments before turning them in. This way you may compare your answers to those I provide, and will not have to wait until the following class when you will get the assignments returned.

It is each student's responsibility to get and submit homework assignments individually. It does not benefit you if you cannot do the work on your own. You will not be permitted to work together on exams, so please work on homework assignments on your own. Working together on any assignment is considered collusion (i.e., cheating) and is a violation of the Honor Code. If you miss a day when homework is assigned, you are responsible for getting the notes, and meeting with either me or a classmate to discuss the material so that you can still complete the assignment and submit it on time. Homework that is not completed on time will result in points deducted. Writing "I did not understand this" on your homework is not acceptable--it is your job to understand the assignment so that you can complete it correctly. This means, if necessary, attempting the homework early enough so there is time to get help if there is a problem. DO NOT wait until the last minute to attempt the homework.

Altogether, your homework score will be based on the percentage of points you earn out of all of the points possible. If there are 15 IBS assignments (15 x 3 = 45) and 10 computational assignments (12 x 5 = 60) then there are 105 possible homework points, and your score will be the percentage you earn out of that total. If you earn full credit on every assignment you will earn the maximum homework points (100 % = 100 points). If you do not submit a couple assignments, you quickly start to lose points (e.g., if you skip 2 IBS and 1 Computational, you would be down to 94/105 points = 89%).

Extra Credit: You may volunteer to serve as a research participant on campus at any time during the semester and earn extra credit, provided you submit proper documentation of your participation. A Research Subject Pool Bulletin Board is located in the basement of Curtis Hall, adjacent to the Psychology Department main office. Check this board periodically for research participation opportunities. You will be given one point for each study you complete, and you may participate in up to 5 studies for credit. This participation is a valuable service to the department and to our discipline. First, it benefits you in that you see first-hand how psychological research is done. Second, it allows our upper-class students and faculty a means of studying topics of interest and may ultimately lead to publications and conference presentations, the very way the scientific discipline of psychology advances. The number of opportunities for research participation varies from semester to semester, and my advice is to take advantage of opportunities as they arise. Spring semester is the time during which seniors are conducting their research, typically during the early middle of the semester. Students who are unable to participate in experiments, or who would prefer alternative opportunities, should speak with me and I will make alternate arrangements, but this must be done early in the semester—do not wait until the last few weeks of the semester. Altogether, each student may earn up to 5 extra credit points through research participation and and/or through completion of class-related assignments (Maximum of 5 extra credit points applied to your total points at the end of the semester—these are not percentage points).

Grading: Your final grade will be assigned on the basis of the percentage of points you earn out of a possible 610 points (three exams, class participation, homework, the papers, plus any extra credit you earn):

Exams	300 points
Class Participation	50 points
Homework	100 points
SPSS Experiment Write-ups	100 points
Total	**550 points**

A	**93.0 - 100%**	**C**	**73.0 - 76.9%**	
A-	**90.0 - 92.9%**	**C-**	**70.0 - 72.9%**	
B+	**87.0 - 89.9%**	**D+**	**67.0 - 69.9%**	
B	**83.0 - 86.9%**	**D**	**60 - 66.9%**	
B-	**80.0 - 82.9%**	**F**	**below 60%**	
C+	**77.0 - 79.9%**			

Note: In order for this course to count for the Psychology major or minor, you must earn a grade of C or better in this course (The grade of C- will not satisfy this requirement).

Strive to do well!! The wisdom of the ages in academia (faculty and academic advisors agree) is that in order for students to do well in college, they should study outside of class approximately 2 hours for every credit/hour of class time. In other words, for a class like ours that meets for three hours per week (excluding recitation), you should be studying or working on problems roughly 6 hours outside of class, per week—just for this class. However, please keep in mind that this is a lab class worth four credits, and so the expectation for work outside of class is higher. This class is very applied in nature; each of you will need to determine individually how much time is necessary for you to grasp the concepts covered and complete the assignments. My advice is to stay ahead with any readings and do not wait until the last minute to complete assignments. Above all else, know that I am available to assist you. As a former colleague often said, "it is the student's job to learn, and the faculty's job to help them do it!"

Spring 2010 Schedule: Changes in this schedule may be necessary; you will be notified when these situations arise.

While there is NOT an official "Textbook" for this course, I have identified several well constructed online resources for students who wish to read more about statistics, or who are having trouble grasping concepts covered in class. The links to two of those websites are provided below, and specific recommendations for reading connected to our class topics are provided in the outline below. These readings, as well as the exercises provided on the websites, are OPTIONAL. If you read this material, keep in mind that formulas and symbols may differ from those presented in class. This information is suggested simply to aid you in your conceptual understanding of material.

1) The following link (Hyperstat) is associated with Rice University and the website is supported by a grant from the National Science Foundation:

   http://davidmlane.com/hyperstat/index.html

2) The following link (Wadsworth) is to a website maintained by Wadsworth Cengage Learning (Publishing Company). There are topical tutorials for not only Statistics, but also for Research Methods.

   http://www.wadsworth.com/psychology_d/templates/student_resources/workshops/stats_wrk.html

Dates	Material to be Discussed	Recommended Weblinks
T 1/19	Syllabus & Introduction to Statistics	
R 1/21	Basic Concepts in Statistics (Topic 1 PP)	Hyperstat CH 1 (Topics 1 – 7) Wadsworth (Scale of Measurement)
F 1/22	Overview of SPSS (SPSS Data Entry PP)	
T 1/26 R 1/28	Data Display (Topic 2 PP)	
F 1/29	Using Microsoft PowerPoint for Graphs PP	
T 2/2 R 2/4	Central Tendency and Variability (Topic 3 PP)	Hyperstat CH 2 (Topics 1 & 2) Wadsworth (Central Tendency and Variability)
F 2/5	SPSS Descriptives PP	
T 2/9 R 2/11	z-scores (Topic 4 PP)	
F 2/12	Catch Up and Review	
T 2/16	EXAM #1 (IN CLASS COMPONENT)	
R 2/18	Hypothesis Testing (Topic 5 PP) EXAM #1 TAKE HOME DUE	
F 2/19	TBA (Go Over Exam)	
T 2/23	Hypothesis Testing (Topic 5 PP)	Hyperstat CH 5 (Topics 1 – 3) Hyperstat CH 6 (Topics 1 – 6) Hyperstat CH 9 (Topics 1 – 8) Wadsworth (Standard Error, Hypothesis Testing, Central Limits Theorem, Sampling Distribution)
R 2/25	Single Sample z Statistic (Topic 6 PP)	Hyperstat CH 10 (Topics 1 – 3)
F 2/26	SPSS Single Sample t Test PP	
T 3/2 R 3/4	Single Sample t Statistic (Topic 6 PP)	Wadsworth (Single-Sample t Test)
F 3/5	NO LAB (Eastern Psychological Association Conference in NYC)	
T 3/9 R 3/11	SPRING BREAK—NO CLASS	

Day/Date	Topic	Reading
F 3/12		
T 3/16 R 3/18	**Independent Samples t Test (Topic 7 PP)**	**Wadsworth (Independent versus Repeated t Tests)**
F 3/19	**SPSS Independent t Test PP**	
T 3/23	**Dependent Samples t Test (Topic 8 PP)**	**Wadsworth (Independent versus Repeated t Tests)**
R 3/25	**Correlations (Topic 9 PP)**	**Wadsworth (Bivariate Scatter Plots, Correlation)**
F 3/26	**SPSS Correlations PP**	
T 3/30	**Correlations (Topic 9 PP)**	
R 4/1	**Catch Up and Review (EXAM #2 TAKE HOME COMPONENT DISTRIBUTED)**	
F 4/2	**BREAK—NO CLASS**	
T 4/6	**NO CLASS—TUESDAY FOLLOWS MONDAY SCHEDULE**	
R 4/8	**EXAM #2 (IN CLASS COMPONENT); EXAM #2 TAKE HOME DUE**	
F 4/9	**TBA (Go Over Exam)**	
T 4/13 R 4/15	**One Way ANOVA (Topic 10 PP)**	**Hyperstat CH 12 (Topics 1 – 3.2.3)** **Wadsworth (One-Way ANOVA)**
F 4/16	**SPSS One Way ANOVA PP**	
T 4/20 R 4/22	**Repeated Measures ANOVA (Topic 11 PP)**	**Hyperstat CH 14 (Topics 1 – 5, 7)**
F 4/23	**SPSS Repeated Measures ANOVA PP**	
T 4/27 R 4/29	**Two Way ANOVA (Topic 12 PP)**	**Hyperstat CH 13 (Topics 1 & 2)** **Wadsworth (Two-Way ANOVA, Factorial ANOVA)**
F 4/30	**SPSS Two Way ANOVA PP**	
T 5/4	**Catch Up and Review (EXAM #3 TAKE HOME COMPONENT DISTRIBUTED)**	
FINALS WEEK (T.B.A.)	**EXAM #3 (IN CLASS EXAM TIME TBA); EXAM #3 TAKE HOME DUE**	

NOTE: Spring Break, Holiday Break and Final's week are scheduled by the college and will be adhered to. You are responsible for anything covered, assigned or due on dates preceding or following breaks. The 3rd exam must be taken at the time arranged by the Registrar's Office—please wait to make arrangements for starting your summer break until this schedule is set, and please plan your departure accordingly.