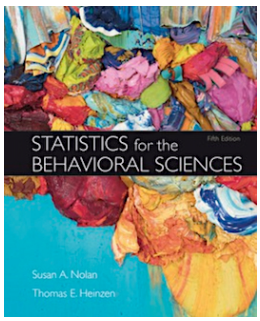
PSYS 313 Statistics in Psychology - Section 700 - CRN 47045 – Asynchronous WEB course

Instructor: Dr. Andy Mienaltowski (Dr. M'ski) E-mail: andrew.mienaltowski@wku.edu
Phone/Text: (270) 681-0270 … a Google Voice number that also receives text messages
Assistance Hours: **MW 3:30-5PM in person or via phone or Zoom (link available on Blackboard site).** Additional appointment times can be set during regular business hours (M-F; 9AM-5PM) given availability. Assistance hours provide a means for students to reach out with specific questions about course content. Instruction occurs via videos linked on Blackboard.

Course Description: 3 hours. Methods of organizing, describing, and analyzing psychological data. (Prerequisites: PSYS/PSY 210 and PSYS/PSY 211 with a grade of "C" or better.)

Course Materials:
For this class, I have selected this textbook as the book for the WKU Store to carry:



- **Nolan, S. A., & Heinzen, T. E. (2020). *Statistics for the Behavioral Sciences* (5th ed). ISBN-13: 9781319190743**

You can use the paper version of this book or the eBook. The following prior editions of the "Essentials of Statistics" version of the book are also suitable. They can be found used or for rental at your favorite online booksellers/renters.

- Nolan, S. A., & Heinzen, T. E. (2013). *Essentials of Statistics for the Behavioral Sciences* (**2nd ed**). New York: Worth. (ISBN-13: 9781429242271) or
- Nolan, S. A., & Heinzen, T. E. (2013). *Essentials of Statistics for the Behavioral Sciences* (**3rd ed**). New York: Worth. (ISBN-13: 9781464107771)
- Nolan, S. A., & Heinzen, T. E. (2013). *Essentials of Statistics for the Behavioral Sciences* (**4th ed**). New York: Worth. (ISBN-13: 9781319143633)

Do **NOT** buy *Essentials of Statistics for the Behavioral Sciences* (**5th ed**). Important content was omitted.

My lectures originate from the above texts. That said, you could also use these free educational resources to review content for the course and to save money:

- Navarro, D. J., & Foxcroft, D. R. (2019). *Learning Statistics with Jamovi: A tutorial for psychology students and other beginners* (Version 0.75). doi: 10.24384/hgc3-7p15 [https://www.learnstatswithjamovi.com/]
- Oja, M. (2022). *Elementary Statistics for Behavioral and Social Sciences*. [https://stats.libretexts.org/Courses/Taft_College/PSYC_2200%3A_Elementary_Statistics_for_Behavioral_and_Social_Sciences_(Oja)]

I normally recommend the Nolan and Heinzen book listed above and carried by the bookstore, but I am open-minded to other authors' coverage provided that they include t-tests, correlation, regression, between-subjects ANOVA, within-subjects ANOVA (or repeated measures ANOVA), and factorial or two-way ANOVA. You can use other published works for this course if you so choose.

Other Required Materials:

- **In order to complete hand calculations in this course, you will need access to a calculator or spreadsheet. Excel is popular for calculations and free to WKU students (https://td.wku.edu/TDClient/34/Portal/KB/ArticleDet?ID=12).** You can use whatever device or program that is useful for basic math. Note that online stats calculators are notoriously inaccurate. Please pay close attention to the equations discussed in the lecture videos. Also please pay close attention to the formats used to describe the outcome of tests. These calculator websites do not apply APA style correctly.
- **Jamovi statistical software** – Free for everyone and should run on all operating systems Windows, Mac OS, Linux, or Chrome at https://www.jamovi.org/ . Also available as a browser-based cloud version. Use of this software is required!

PSYS 313 – Statistics in Psychology

Course Learning Objectives:

- Describe the measures of central tendency and variability
- Present visual representations of data
- Develop a basic foundation in using data for statistical inferences
- Use statistical tests to examine the impact of independent variables on dependent variables
- Explore relationships between observed variables and examine the predictive value of one or more factors in describing an outcome
- Select the appropriate statistical test for the research question under examination
- Apply knowledge of statistical tests using stats software used by psychologists (e.g., Jamovi)

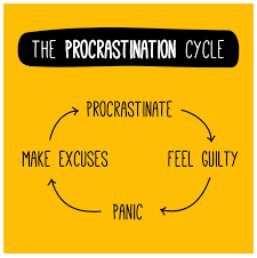
What to expect in this class:

This course provides a foundation in calculating descriptive statistics and in the appropriate use of inferential statistics to (a) examine if experimentally manipulated factors impact outcome measures, and (b) explore the value that observed variables have in predicting other observed variables.

Statistics involves math, but the performance of calculations are meant to be more routine than complex. My philosophy is to discuss the content with you both conceptually and practically. We will work through examples to understand why a specific test is applied, how to interpret the outcome, and what it means for the measures/manipulations used. Doing this will require the use of some mathematical operations with formulas. The more exciting part of the course involves using Jamovi stats software to do math for us so that we can focus our attention on interpreting the outcomes of statistical tests. Psychologists exclusively use stats software to analyze data instead of doing these tests by hand. Because this course is preparing you to go out into the world to analyze data, it is vital that you have an opportunity to use stats software. Demonstrations of stats software will take place in the video lectures as well as via Jamovi-based activities.

This course does not use exams. As you learn, your progress in the course will be assessed using activities instead of exams. There are two types of activities – weekly Blackboard activities and Jamovi activities. For these activities, you can use your books and your notes. These activities emphasize applied learning that capture your understanding of the concepts that we cover instead of rote memorization.

How am I going to learn about stats in this course?



- You will learn about statistical analyses each week by watching video lectures produced by the course instructor. You should set aside time to view and take notes on approximately 3 hours of videos each week.
- **The covered content is identical to that discussed in an in-person course.**
- To be successful, **DO NOT PROCRASTINATE**. If you wait until the last minute to watch the week's videos, you risk doing poorly on the weekly activities, as the videos build on one another.
- As you watch videos, note the formulas and techniques used. From video to video, note what new information is being presented. It is your job to take notes over the content and to work through the videos' examples.
- Along with each major concept, there will be Blackboard activities and Jamovi-based activities. These take time, so please be sure to get started on reviewing material and working on these activities as soon as possible when the week begins.

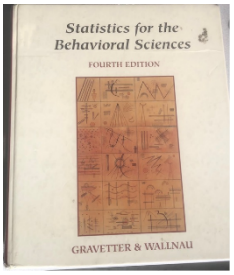
This is an online course, so is it easier than a typical class?

- No, this online class is not easier than a typical class that meets in person. In fact, it may even be harder for students who do not manage their time wisely.
- This class is **not** a self-paced class. You have some flexibility with when during the day you consume the material, but there are weekly deadlines that should not be ignored.
- **A word of encouragement for you.** Stats is often the most challenging course completed by students studying psychology

when earning a bachelor's degree. This is true for in person and online courses. I hope that this course builds your confidence in performing statistical tests. The goal of this course is to help you develop tools that you can use as a professional in the future when faced with data to analyze. Students often do well in the course because there are regular, weekly activities and because you are not taking formal, closed-book timed exams. To find this success, (a) **DO NOT PROCRASTINATE**, (b) **create a regular routine** where you block off time each week to watch videos and complete activities, and (c) **take advantage of office hours** or setting up an appointment to chat. You will get feedback each week on your work.

Readings:

- The textbooks recommended for this course cover statistical tests using step-by-step guides and examples. You are expected to read the textbook, whichever one you choose. At minimum, you should skim through each section while we cover the content to ensure that you understand what is discussed. The recommended textbooks include worked out examples! Some also include sample problems with solutions in the appendices at the end of the book.
- You can search your textbook's table of contents for the specific tests that we are covering to know which chapter applies. Guidance is provided in this class with test names. Please be careful when using formulas from these books. You will be accountable for learning and applying those formulas discussed in the course videos.
- If you do purchase a copy of a textbook instead of using a free open educational book, then I recommend that you purchase an older, used edition to keep indefinitely. It will serve as a handy reference for your future courses, research, and post-baccalaureate training and/or career in psychology. I have kept mine from my time as an undergraduate, and it still is useful to me. A stats textbook that is easy to read and understand is an excellent reference to hold on to. **(Image: M'ski's old stats book printed in 1996)**



How will my learning be assessed? Tell me more about the activities I will have to complete.

- Your learning will be assessed using **23 activities administered via Blackboard**. These activities create distinct modules to break up the material. There are two types of activities: **Weekly Blackboard Activities** (worth up to 520 points) and **Jamovi Activities** (worth up to 330 points). The topics and point values for each activity can be found in the course calendar in this syllabus. You are allowed to use your books and your notes on these activities.
- **Weekly Blackboard activities** – There are 12 activities, and they will be due on Tuesdays and/or Thursdays at 4PM, depending on the week, these activities will be broken down into 2 parts – a **multiple-choice segment** and a **short answer segment**.
  - For the **multiple-choice segment**, you will have up to 2 attempts and will receive immediate feedback on each attempt. This segment builds your background over the week's material.
  - For the **short answer segment**, you will only have 1 attempt. Because this segment requires scoring, you will **not** get immediate feedback. I will endeavor to score it as quickly as I can. This segment requires that you apply what you've learned to perform a full test to address a research question posed in a problem.
  - You will be able to request a re-do of up to 2 of the first 10 weekly Blackboard activities. Re-do requests must be made **no later than Wednesday, April 19 at 4PM** by email to Dr. M'ski. When approved, you will have up to 5 business days from the day of approval to repeat the activity. For a re-do, you will be given two additional attempts for the multiple-choice segment of that activity and one additional attempt for the short answer/ essay segment of that activity.
- **Jamovi activities** – There are 11 activities that will require you to use Jamovi to apply what you are learning in class to consider datasets. Jamovi activities will be due on Fridays at 4PM (except the final project), and are broken down into 2 parts - **EdPuzzle video segment** and **Analysis segment**.

- **EdPuzzle segment:** Watch a short video on how to use Jamovi to perform a test. While watching, you will answer multiple-choice questions, earn points, and get immediate feedback.
- **Analysis segment:** Using what you have learned from the demo in the EdPuzzle segment, follow instructions to perform statistical tests within Jamovi, to annotate your output, and to export your output as a pdf file to upload to Blackboard. Students who upload corrupted files, Jamovi .omv files, or screenshots will receive a zero on this segment of the Jamovi activity. Follow all instructions carefully.
- You have only 1 attempt for each segment. You **cannot** request to re-do Jamovi activities.
- A final Jamovi activity (Final Project) will replace a final exam. It is worth 50 points and is due by 4:00PM on Wednesday, May 3. This final project cannot be submitted after the deadline. To be clear, late final projects will not be accepted. This final project is optional. The activity allows students to recover points lost through the term by selecting the appropriate analyses for research questions posed for a database.

Late-work policy:
All students can submit their activities up to 24 hours late on Blackboard for full credit with no questions asked. After this point, the activity is given a zero. This policy is meant to accommodate last minute, unexpected emergencies that students may have. Students should not treat this late period as the actual deadline. Note that technical problems with Jamovi and Blackboard on the student's end are their own responsibility to resolve. Such problems will not lead to a further extension of the late period.

You are responsible for learning the material in the course. Students should get started on watching the videos for each week early on in the week and leave adequate time to meet the deadline for completing the activities. Students who procrastinate do poorly in the course, run into unexpected problems, and ask for exceptions and extensions that will not be granted.

The deadlines in this course are real and are important to the pedagogy. You will learn stats consistently and in small chunks. This will allow you to demonstrate your knowledge and skills and get feedback. This course is **not** self-paced, nor is it On Demand.

How to beat procrastination?
When completing an online course, students often wait until the last minute to begin the work for the week. Students can let anxiety build until they feel guilty or compelled to do the work. In a face to face class, this can result in cramming and pulling all-nighters for papers.

This class is specifically designed to minimize your procrastination! First, there are low stakes activities each week on Blackboard. The multiple-choice activities on Blackboard train you for the short answer Blackboard activities. Second, the Jamovi activities are designed with how-to instruction so that you first watch a brief video and then apply what you've learned to an assignment. Third, you have access to all of the videos used for instruction and can return to specific segments of the videos and even watch the videos at faster than 1x speed (or slower than 1x speed). Dive in and treat each week like a new learning experience. If you start early in the week, you can watch a video and then re-watch it if it doesn't make sense to you, noting questions that you have for Dr. M'ski.

You want to give yourself time to be able to seek out assistance. Thursdays and Fridays are not great days for seeking out assistance because these are the days on which you should be finalizing your Blackboard activities and Jamovi activities to submit. By taking the time to learn early on in the week, you have more control over your pace and reduce stress when it comes to working on activities. If you wait until Wednesday night or Thursday to get started, you are not being fair to yourself.

PSYS 313 – Statistics in Psychology

By using activities instead of exams and by getting you feedback quickly each week, you can monitor patterns in your learning and calibrate the time that you invest in the class. You are not in this on your own. Dr. M'ski looks forward to working with you. To take advantage of the assistance hours, you need to be prepared to ask questions, and that will require that you have watched the videos for the week.

Can I work on my activities with others in the class or a tutor?

- **For Jamovi activities, the answer is NO!**
  - Of course, you can discuss how to generally use Jamovi with others. However, when generating output for an activity, interpreting output, and annotating output, you must do this on you own.
  - Sharing and/or copying of Jamovi output is considered cheating and will result in a zero on the activity and the offense will be referred to WKU Judicial Affairs for cheating.

- **For the weekly Blackboard activities – the activities that have multiple-choice and short-answer segments – the answer is YES! Absolutely!**
  - Statistics involve collaboration with others and seeking assistance from authorities when uncertain. If asked to refrain from collaborating, students may do it anyways and feel guilty. That is a horrible position to be in and may even prevent some from seeking assistance for fear of being caught.
  - Consequently, for the weekly Blackboard activities, you may discuss the activities with others in class or a tutor, but you have the responsibility to be open and transparent if you do.
  - For each activity segment, you will be required to disclose collaborators and the capacity with which you worked together. You must do this **if you receive assistance and/or if you offer assistance**. The PSYS 313 Collaboration Recognition form can be found in each activity folder, and it is also linked here: https://forms.gle/utcdApEQW56YKdQB8
  - By disclosing this information, you acknowledge a classmate who helped you, you acknowledge that you took on additional responsibility to help a classmate and did not try to steer them in the wrong direction if they did make a mistake, and you provide a description of what was discussed in case both parties make mistakes and need additional help. I also know that you worked together and did so in a transparent way.
  - Failure to disclose collaboration is a violation of the academic integrity policy of this course and constitutes cheating. It will result in a zero on the weekly activity. Note also that any attempt to guilt others to assist you is unacceptable and is also considered a violation of the academic integrity policy. You are always welcome to reach out to me for additional assistance. Please don't burden your classmates.



Can I use homework websites and services for assistance?

- NO! Use of these sites or services is prohibited for PSYS 313.
- I have created the activities for this course, so they are my intellectual property. Attempts to illegally distribute my activities will result in an F in the course and a hearing with the university's judicial affairs office. You may also be subject to civil legal action for distributing my intellectual property without permission.
- Note that cheat sites do NOT protect their clients. They turn over client information (including meta-data) to universities. Please seek assistance through legitimate means. If you need assistance, reach out. The temptation to cheat is greatest when time management becomes an issue. If this happens to you, please do not panic and feel tempted to cheat. Please reach out to me instead.

PSYS 313 – Statistics in Psychology

- Recently AI sites have become a popular means for students to avoid completing school work. Note that your work is subject to being submitted to AI detection platforms. Also, AI is not familiar with my approach to teaching statistics. Although accurate, my approach to teaching stats is unique to me. AI is incapable of picking up these idiosyncrasies. Use of AI is cheating. If caught, a report will be made to Judicial Affairs and a zero will be entered for the entirety of the activity.

How is my grade in the course determined?

Overall, you have an opportunity to earn up to 850 points in the course. **However, your grade will be determined out of 800 points. Do not trust any percentage given to you by Blackboard.**

Because you can meet the same learning objectives through multiple activity types and because the final Jamovi project will also have objectives that overlap with these activities, setting the basis of your grade out of 800 instead of the total 850 offers you more flexibility. In a way, you can think of the final Jamovi project as a means to earn extra credit in the course. My goal is to reduce stress one might experience over their grade by allowing you to hold yourself accountable for regaining lost points through the final project and through limited repeated attempts at activities that were particularly challenging (i.e., re-dos).

Points available in PSYS 313

Weekly Blackboard Activities…	520 points
Jamovi Activities …	330 points
Total	850 points available … but your grade is out of 800 points

Grading Scheme: (no rounding)

716 to 800 points	=	A	(4.0)
636 to 715 points	=	B	(3.0)
556 to 635 points	=	C	(2.0)
476 to 555 points	=	D	(1.0)
< 476 points	=	F	(0.0)

Extra credit, if made available, is made available to the entire class and not to individual students. If you are unhappy with your point total at the end of the term, please complete the final project. It is worth 50 points out of the 850 available and can have a positive benefit to your point total. Exceptions will not be made for individual students. To be clear, your grade is based on your performance in the course. To have the best opportunity to earn the grade you hope to achieve, please meet all activity deadlines for the course and make a schedule to keep up with the course every week.

Students with Disabilities:
Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Student Accessibility Resource Center, 1074 DSU (Downing Student Union); https://www.wku.edu/sarc . Their phone number is (270) 745-5004. TDD: (270) 745-3030. Their email is sarc.connect@wku.edu . Please do not request accommodations directly from the instructor without a letter of accommodation from the SARC.

Important information:
The university wants you to be aware that important information relevant to all of your courses can be found at this link: https://www.wku.edu/syllabusinfo/index.php

Title IX/Discrimination & Harassment:
WKU is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy #0.2070 and Discrimination/Harassment Policy #0.2040. Under these policies,

discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Ena Demir, 270-745-6867 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121. Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159. Relevant university documents:

- www.wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievance procedure.pdf
- www.wku.edu/policies/hr_policies/2040 _discrimination_harassment_policy.pdf

Covid-19:
All students are strongly encouraged to get the COVID-19 vaccine. In accordance with WKU policy, all students must call the WKU COVID-19 Assistance Line at 270-745-2019 within 4 hours of testing positive for COVID-19 or being identified as a close contact to someone who has tested positive. The COVID Assistance Line is available to answer questions regarding any COVID-19 related issue. This guidance is subject to change based on requirements set forth by federal, state, and local public health entities. Please refer to the Healthy on the Hill website for the most current information.
www.wku.edu/healthyonthehill

Online courses and Regular/Substantive Interaction:
The U.S. Department of Education requires that distance education courses must include regular and substantive interaction between students and faculty. For more information about Regular and Substantive Interaction at WKU, please visit the Regular and Substantive Interaction in Online and Distance Learning webpage (https://www.wku.edu/citl/rsi.php).

In this course, regular and substantive interaction will take place in the following ways:

- Weekly announcements
- Individualized, timely, and detailed feedback on assignments provided within one week of submission
- Assignments scheduled throughout the course of the term on a regular, predictable schedule
- Students will be able to ask questions of the instructor via e-mail, phone, and Zoom, as well as attend live office hours to seek assistance

PSYS 313 – Statistics in Psychology

Asynchronous Course Map – Week by Week Breakdown of Relevant Course Materials

Week 1 (*Tues, Jan 17 - Sat, Jan 21*) **Syllabus, Introduction, and Research Methods Review**

M'ski YouTube Video Links

- Orientation to PSYS 313
- Research Design and Descriptives
  - Review of Research Design

Activities due

- Syllabus agreement (5 points extra credit– due Thurs, Jan 19 at 4PM)
- **Activate EdPuzzle via link in Jamovi activities** (1 point extra credit – due Fri, Jan 20 at 4PM)

Week 2 (*Mon, Jan 23 - Sat, Jan 28*) **Visualizing Data, Central Tendency, & Variability**

M'ski YouTube Video Links

- Research Design and Descriptives
  - Visualizing Data
  - Measures of Central Tendency
  - Measures of Variability
  - What is the standard deviation and how do you calculate it?

Activities due

- **Blackboard 1** – Research Methods, Central Tendency, and Variability (30 points – due Thurs, Jan 26 at 4PM)
- **Jamovi 1** – Jamovi Installation video and file opening (15 points – due Fri, Jan 27 at 4PM)

Week 3 (*Mon, Jan 30 - Sat, Feb 4*) **Standardizing Individual Scores and Sample Means**

M'ski YouTube Video Links

- Z-scores and hypothesis testing
  - Z-scores
  - Converting a percentile score that is greater than the 50th percentile to a z-score and then to a raw score
  - Converting a percentile score that is less than the 50th percentile to a z-score and then to a raw score
  - Central Limit Theorem
  - Relating Sampling to Hypothesis Testing

Activities due

- **Blackboard 2** – Z-score for individuals (20 points, due Thurs, Feb 2 at 4PM)
- **Jamovi 2** – Jamovi Frequency tables and Descriptives (25 points – due Fri, Feb 3 at 4PM)

Week 4 (*Mon, Feb 6 - Sat, Feb 11*) **Hypothesis Testing with Z-scores**

M'ski YouTube Video Links

- Z-scores and hypothesis testing
  - Hypothesis testing with a z-test
  - Hypothesis testing with a z-test (second example)
  - Confidence Intervals and Effect Sizes

Activities due

- **Blackboard 3** – Z-score for samples & central limit theorem (30 points – due Tues, Feb 7 at 4PM)
- **Blackboard 4** - Z-scores hypothesis testing (40 points – due Thurs, Feb 9 at 4PM)

Week 5 (*Mon, Feb 13 - Sat, Feb 18*) **One-Sample T-tests**

M'ski YouTube Video Links

- t-tests
  - Single Sample t-test Part 1
  - Single Sample t-test Part 2
  - Single Sample t-test Part 3

Activities due

- **Blackboard 5** – One-sample t-test (40 points – due Thurs, Feb 16 at 4PM)
- **Jamovi 3** – Jamovi one-sample t-test (25 points – due Fri, Feb 17 at 4PM)

PSYS 313 – Statistics in Psychology

Week 6 (*Mon, Feb 20 - Sat, Feb 25*) **Paired Samples T-tests**

M'ski YouTube Video Links

- t-tests
  - Paired Samples t-test Part 1
  - Paired Samples t-test Part 2

Activities due

- **Blackboard 6** – Paired sample t-test (40 points – due Thurs, Feb 23 at 4PM)
- **Jamovi 4** – Jamovi paired-samples t-test (25 points – due Fri, Feb 24 at 4PM)

Week 7 (*Mon, Feb 27 - Sat, Mar 4*) **Introducing Independent Samples T-tests**

M'ski YouTube Video Links

- t-tests
  - Independent samples t-test Part 1
  - Independent samples t-test Part 2
  - Independent samples t-test example in Jamovi

Activities due

- **Jamovi 5** – Jamovi independent samples t-test (25 points – due Fri, Mar 3 at 4PM)

Week 8 (*Mon, Mar 6 - Sat, Mar 11*) **Completing Independent Samples t-tests and Introducing Between-Subjects ANOVA**

M'ski YouTube Video Links

- t-tests
  - One-tail independent samples t-test example
  - Two-tail independent samples t-test example
- ANOVAs
  - What is an ANOVA? Between-Subjects ANOVA 1
  - Complete example of ANOVA Between-Subjects ANOVA 2

Activities due

- **Blackboard 7** – Independent sample t-test (60 points – due Thurs, Mar 9 at 4PM)

Week 9 (*Sun, Mar 12 - Sun Mar 19*) **Spring Break – no class responsibilities this week**

Week 10 (*Mon, Mar 20 - Sat, Mar 25*) **Continuing Between-Subjects ANOVA and Introducing Within-Subjects ANOVA**

M'ski YouTube Video Links

- ANOVAs
  - Between-subjects ANOVA 3 (groups with unequal sample sizes)
  - Between-subjects ANOVA 4 (another example with unequal sample sizes)
  - Within-Subjects ANOVA 1 (Partitioning sums of squares)
  - Within-Subjects ANOVA 2 (A complete example)
  - Also refer to notes on how to write up ANOVA in APA format

Activities due

- **Blackboard 8** – Between-subjects ANOVA (60 points - due Thurs, Mar 23 at 4PM)
- **Jamovi 6** – Jamovi between-subjects ANOVA (35 points – due Fri, Mar 24 at 4PM)

Week 11 (*Mon, Mar 27 - Sat, Apr 1*) **Continuing Within-Subjects ANOVA and Introducing Two-Way ANOVA**

M'ski YouTube Video Links

- ANOVAs
  - Within-Subjects ANOVA 3 (another full example)
  - Within-Subjects ANOVAs – tricks to calculate SS subjects
  - Also refer to notes on how to write up ANOVA in APA format
- Two-Way ANOVA
  - Two-Way Between-Subjects ANOVA 1

Activities due

- **Blackboard 9** – Within-subjects ANOVA (60 points - due Thurs, Mar 30 at 4PM)
- **Jamovi 7** - Jamovi within-subjects ANOVA (35 points – due Fri, Mar 31 at 4PM)

PSYS 313 – Statistics in Psychology

Week 12 (*Mon, Apr 3 - Sat, Apr 8*) **Continuing Two-Way ANOVA**

M'ski YouTube Video Links

- Two-Way ANOVA
  - Two-Way Between-Subjects ANOVA 2
  - Two-Way Between-Subjects ANOVA 3
  - Two-Way Between-Subjects ANOVA 4

Activities due

- **Blackboard 10** – Two-way ANOVA (40 points – due Thurs, Apr 6 at 4PM)
- **Jamovi 8** – Jamovi two-way ANOVA (35 points – due Fri, Apr 7 at 4PM)

Week 13 (*Mon, Apr 10 - Sat, Apr 15*) **Correlation Analysis**

M'ski YouTube Video Links

- Correlations
  - Correlations 1
  - Correlations 2
  - Correlations 3
  - Correlations 4

Activities due

- **Blackboard 11** – Correlation (40 points – due Thurs, Apr 13 at 4PM)
- **Jamovi 9** - Correlation (25 points – due Fri, Apr 14 at 4PM)

Week 14 (*Mon, Apr 17 – Sat, Apr 22*) **Introducing Regression Analyses**

M'ski YouTube Video Links

- Regression Analyses
  - Regression 1
  - Regression 2
  - Regression 3

Activities due

- None due this week. Your request to re-do up to two **Blackboard Activities** from Activities 1-10 is due by 4PM on Wed, April 19. If you earned a 0 on an activity, now is a great time to replace that 0 with a score. To request your re-dos, reach out to Dr. M'ski by e-mail to make your request.

Week 15 (*Mon, Apr 24 - Sat, Apr 29*) **Continuing Regression Analyses**

M'ski YouTube Video Links

- Regression Analyses
  - Regression 4
  - Regression 5

Activities due

- **Blackboard 12** – Regression (60 points – due Thurs, Apr 27 at 4PM)
- **Jamovi 10** – Jamovi regression (35 points – due Fri, Apr 28 at 4PM)

Week 16 (*Mon, May 1 – Thurs, May 4*) **Final Exam week**

M'ski YouTube Video Links

- None

Activities due

- **Final Jamovi project** opens at 10:00AM on Mon, May 1 and is due by 4:00 PM on Wed, May 3