



PSY 302-01E Statistics and Research Design I

COURSE SYLLABUS: Spring 2024

TR 11:00a-12:15p

Location: Henderson Hall-206

INSTRUCTOR INFORMATION

Instructor of Record: Dr. Benton Pierce, Associate Professor

Class Time: TR 11:00-12:15

Office Location: 232-Henderson Hall

Office Hours: Mondays, 1-4 pm.; Thursdays, 2-4 pm.

University Email Address: benton.pierce@tamuc.edu

Preferred Form of Communication: email

Communication Response Time: 48 hours excluding weekends

Lab Instructor: Bailey Ayers

Office Location: Binnion Hall-211

Office Hours: N/A

University Email Address: Bailey.Ayers@leomail.tamuc.edu

Preferred Form of Communication: email

Communication Response Time: 48 hours excluding weekends

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required

Nestor & Schutt, *Research Methods in Psychology* (3rd edition)

ISBN: 978-1-544-32377-0

Hurlburt, *Comprehending Behavioral Statistics* (6th edition)

ISBN: 978-1-305-65297-2

The syllabus/schedule are subject to change.

Course Description

This course is the first part of a two-part series on statistics and research design. This course is intended to introduce you to the basic and most common methods of collecting psychological data. We will cover ethics in research, the concepts of reliability, validity, generalizability, measurement, descriptive statistics, probability, z-scores, and the fundamentals of experimental design. Special attention will be given to writing in the style of the American Psychological Association.

The lab allows for additional time to discuss the materials covered in lecture and to work on applying what you have learned in lecture through developing a research paper. This research paper will be a hypothetical replication study. This project is also broken up into two semesters. This semester you will write a literature review and a methods and expected results section. Each week in lab will involve working on a particular portion of your research paper. All of this will culminate in an APA style research paper.

Student Learning Outcomes

1. Learning to review the primary literature (improving library research skills, increasing familiarity with scientific writing, and reading journal articles)
2. Learning how research ideas are developed, including the formulation of testable hypotheses
3. Analysis of research results, including a basic understanding of descriptive statistics, probability, and percentiles
4. Produce a quality APA style report

COURSE REQUIREMENTS

Instructional Methods

This is a face-to-face course. Students are **STRONGLY** encouraged to attend all lecture and lab meetings. If you need to miss a meeting, materials will be available on D2L. Importantly, most students benefit from attending class and participating in class discussions.

Student Responsibilities or Tips for Success in the Course

Throughout our course, we will learn the science of how to learn and practice them. The following are some basics.

- 1) Check and read class emails promptly for announcements, updates, clarifications, etc.
- 2) Take notes and participating in lectures, read the assigned parts of the textbook to check if your listening comprehension matches with the textbook descriptions, and fill in the missing pieces.
- 3) Quiz yourself often. Can you define a concept in your own words?
- 4) Complete all lab assignments and all exams.

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GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

Assessments

Your final grade is weighted 80% lecture and 20% lab. However, to receive a C or better in the course, students MUST receive a grade of C or better in BOTH the lecture and lab sections. Students who receive less than a C in either the lecture or lab will receive either an automatic D in the course, or their earned course grade if lower than D.

The lab and lecture grades are further broken up into separate assignment. The contribution of each assignment to the corresponding category (lecture or lab) appears next to each item.

Lecture Portion

Exams (60%) - There will be three exams given during the semester, plus a final exam that will be cumulative. These four exams will be weighted equally. There will be no make-up exams except as mandated by University policy for University-excused absences, religious holidays and major illnesses. Students should contact the professor **prior** to the scheduled exam if possible, or within 24 hours of missing the exam due to accident or illness.

Homework (30%) – There will be four homework assignments turned in for a grade. These assignments are designed to increase your understanding of the topics being covered and give you the opportunity to apply course material. **Due dates for homework assignments are listed below on the schedule of topics.**

Research Engagement (10%) - A goal of this class is to help you familiarize yourself with research methods. One way to obtain this goal is to have you participate in research studies. Participating in research studies contributes to students and faculty at A&M - Commerce, your understanding of how research is conducted, and human knowledge in general. All students in this class will be required to participate in the psychology department's participant pool or complete alternative assignments (see D2L for more information on alternative assignments).

Students must complete a total of 6 experiment credits. When you first sign into the experiment management system (EMS) you will be asked to take a prescreen. The prescreen takes about 20 minutes to complete. If you complete the prescreen in the

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first two weeks of the semester you will receive 0.5 free experiment credit. This can be combined with later experiments that are worth 0.5 credit.

Lab Portion

Labs take place on Tuesdays or Thursdays, depending on which section you are enrolled in. All lab assignments are due the following Tuesday.

LA 1: Pick a Topic (5%) – Students must pick one of the articles from the list. This assignment is graded pass/fail.

LA 2: List of Five Articles (5%) – Students will submit a list of five articles relevant to the paper they are replicating. These articles will likely be the ones later included in your literature review. This assignment is graded pass/fail.

LA 3: Ethics Training (10%) – Students will complete the CITI ethics training. This assignment is graded pass/fail.

LA 4: Article Review Template (5%) – Students will read an article and complete the article review template. General feedback will be provided to help make sure you are on track.

LA 5: Summarize an Article (10%) – Students will summarize one of their articles and submit it for feedback. This assignment will help make sure you are summarizing and paraphrasing correctly before you go any further with your literature review. This assignment is graded pass/fail. General feedback will be provided to help make sure you are on track.

LA 6: Literature Review Outline (5%) – Students will submit an outline for their literature review. This assignment is graded pass/fail.

LA 7: Literature Review (20%) – Students will conduct a brief APA style literature review. This will later serve as the introduction to your paper. Your paper must include 6 or more references; all should be from reputable scholarly sources and all of your references must primarily contain reports of empirical research. Note that the article you are replicating is included in this number. No secondary sources may be included. Your paper must be double-spaced in MS Word with 12 pt. Times New Roman font and 1" margins on all 4 sides. Your paper must be 5-7 pages long (this includes your title page and reference pages). Some feedback will be provided and you are expected to make changes to the introduction of your final paper accordingly.

LA 8: Hypotheses and Expected Results section (5%) – Students will write the hypotheses and expected results section as if this were a proposal.

LA 9: Operational Definitions and Data spreadsheet (5%) – Students will list and operationally define all variables in their study. They will also create a data spreadsheet

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that could be used for recording data for the experiment. The purpose of this exercise is to get students thinking about the data should look like for their project. Students will write three lines of fictitious data to aid this process. This assignment is graded pass/fail.

LA 10: Participants Section (5%) – Students will write and submit a participants section for their study. This assignment is graded pass/fail. General feedback will be provided to help make sure you are on track.

LA11: Methods Section (25%) – Students will submit their methods section, and all previous sections. Any recommended edits to the previous sections should appear in this version.

Guidelines for Homework and Lab Assignments:

1. Assignments are to be turned in by 11:59pm on the due date.
2. I will accept emailed assignments on an emergency basis only. Assignments sent through email must be received before 11:59pm on the due date.
3. **ABSOLUTELY NO LATE ASSIGNMENTS** will be accepted. If your assignment is more than 30 minutes late you will earn 0 points for that assignment.
4. Assignments are intended to be completed individually. **DO NOT WORK TOGETHER ON ASSIGNMENTS.**

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Using the learning management system (D2L), searching the Internet for texts, using Library resources.

Instructional Methods

The primary teaching method for this course will be lecture peppered with class discussion and in-class activities designed to elucidate information from the text and lecture.

Student Responsibilities or Tips for Success in the Course

- 1) Check and read class emails promptly for announcements, updates, clarifications, etc.
- 2) Take notes as you listen to lectures, read the assigned parts of the textbook to check if your listening comprehension matches with the textbook descriptions, and fill in the missing pieces.
- 3) Quiz yourself often. Can you define a concept in your own words? Can you answer 3 or 4 questions of the textbook practice questions correctly?
- 4) Review the materials on a regular basis. Consider the Pomodoro technique. Set aside 20-25 minutes each time and study.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

A Note about Your Grade. Please remember that the grade you receive in this course is the grade that you **EARN**, not a grade that I “give” you. Therefore, please **do not** come to me at the end of the semester and ask what extra credit assignments you can do to improve your grade. I am happy to help you improve your study skills, but you need to come ask me for help. Furthermore, it is imperative that you ask for help early in the semester, not at the very end. Please remember that I genuinely want you to do well in this course, but that will require taking my advice on how best to study and learn this material. This course is difficult and will require that you study and prepare somewhat differently than the way you have in most of your other courses.

Attendance Policy. Students are expected to be present for all face-to-face classes and labs. **Students who have excessive unexcused absences will be dropped from the course;** four or more absences constitute excessive absences for the purpose of this course. Students are responsible for notifying the instructor of an excused absence and providing appropriate documentation when necessary. Students are also responsible for requesting any makeup work during excused absences.

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Cell Phones/Laptops/Other Electronic Devices. Cell phones must be turned off or placed on silent during class. If you have an emergency and may need to take a call during class, please see me before class and leave your cell phone on top of your desk. Otherwise, I expect to see **no** cell phones during class.

Communication and Support

As stated earlier, my office hours will be on Mondays from 1 to 4 pm, and on Thursdays from 1 to 4 pm. If you cannot come by during those times, please contact me and I will find another time to accommodate you. In terms of contacting me, the best way is through email according to the guidelines below.

EMAIL Guidelines

To provide a framework for professional communication, emails must contain the following:

1. Subject line: Course (PSY 302); additional information if desired
2. Address the recipient: Open with Dr. Pierce
3. Use good grammar and avoid acronyms (i.e., do not write like you text)
4. Close with your name

Please send emails from your University account. I am not allowed to discuss grades over email. If you would like to discuss your grade, please make an appointment during office hours or see me after class.

Counseling Center at A&M-Commerce

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

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TECHNOLOGY REQUIREMENTS

Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A

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Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Apple® Safari®	Latest	N/A

Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or point release of that major version) and the previous major version of iOS (the latest minor or point release of that major version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
 - 512 MB of RAM, 1 GB or more preferred
 - Broadband connection required courses are heavily video intensive
 - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- For YouSeeU Sync Meeting sessions 8 Mbps is required.** Additional system requirements found here: <https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>
- You must have a:
 - Sound card, which is usually integrated into your desktop or laptop computer
 - Speakers or headphones.

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- *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: [JAVA web site http://www.java.com/en/download/manual.jsp](http://www.java.com/en/download/manual.jsp)
- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.

JavaScript is enabled.

Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
 - [Adobe Reader https://get.adobe.com/reader/](https://get.adobe.com/reader/)
 - [Adobe Flash Player \(version 17 or later\) https://get.adobe.com/flashplayer/](https://get.adobe.com/flashplayer/)
 - [Adobe Shockwave Player https://get.adobe.com/shockwave/](https://get.adobe.com/shockwave/)
 - [Apple Quick Time http://www.apple.com/quicktime/download/](http://www.apple.com/quicktime/download/)
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

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COMMUNICATION AND SUPPORT

Brightspace Support

Need Help?

Student Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words "[click here](#)" to submit an issue via email.



System Maintenance

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment.

Interaction with Instructor Statement

If you contact me or a teaching assistant and do not receive an email response within 48 hours (excluding weekends), most likely, your email was not received.

Grades/Feedback on assignments will typically be given within one week, but may take up to two weeks for longer assignments or busier times of the semester.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

There will be NO after the fact make-up examinations and late assignments will not be accepted (except in cases of military deployment). If you are traveling and representing the university (e.g., band members, athletes, etc.) you need to request accommodations BEFORE an exam is due, not after. Otherwise I drop the lowest exam score to account for potential emergencies.

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University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: [Netiquette](#)

<http://www.albion.com/netiquette/corerules.html>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

ADA Statement

Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a

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learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to

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community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

AI use policy [Draft 2, May 25, 2023]

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

13.99.99.R0.10 Graduate Student Academic Dishonesty

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Tentative Course Calender

Week	Dates	SCHEDULE OF TOPICS AND EXAMS				
		<i>Topic</i>	<i>Assigned Readings</i>	<i>Assignment</i>	<i>Lab</i>	<i>Assignment</i>
1	Jan. 11	Syllabus & Introductions				
2	Jan. 16 Jan. 18	Statistics Basics Statistics Basics & Probability	Hurlburt c1 & 2	HW 1: Due	<i>Introduction and Finding a Topic</i>	LA 1
3	Jan. 23 Jan. 25	Ethics <i>Exam Review</i>	Nestor c4		Finding Sources	LA 2
4	Jan. 30 Feb. 1	Exam 1 Describing Data: Central Tendency	Hurlburt c4		CITI Training Ch. 3 (Nestor)	LA 4
5	Feb. 6 Feb. 8	Describing Data: Variability Normal Distributions and z scores	Hurlburt c5 Hurlburt c6		How to Read Journal Articles	LA 5
6	Feb. 13 Feb. 15	Normal Distributions and z scores Exam Review	Hurlburt c6	HW 2: Due	APA Formatting and Plagiarism Ch. 16 (Nestor)	
7	Feb. 20 Feb. 22	Exam 2 <i>No class</i>			How to Write a Literature Review	LA 6
8	Feb. 27 Feb. 29	Probability & Sampling Distributions	Hurlburt c1, 7&8 Nestor c6	HW 3: Due	How to write a Reference Page	LA 7
9	Mar. 5 Mar. 7	Hypothesis Testing -One Sample Hypothesis Testing- One Sample	Hurlburt c10 Hurlburt c10		Making an Outline	
10	Mar. 11-15	Spring Break				
11	Mar. 19 Mar. 21	Hypothesis Testing – Two Independent Samples	Hurlburt c11		Write Paper	

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12	Mar. 26 Mar. 28	Exam Review Exam 3		HW 4: Due	Write Paper	LA 8
12	Apr.2 Apr. 4	Measurement Correlation	Nestor c5 Nestor c7		Write Paper	LA 9
13	Apr. 9 Apr. 11	Correlation NO CLASS			Operationally Define Measures	
14	Apr. 16 Apr. 18	Experimental Design	Nestor c8		NO LAB	LA 10
15	Apr. 23 Apr. 25	Experimental Design & Confounds	Nestor c9		Create Hypotheses and Expected Results	LA 11
16	Apr. 30 May 1	Study day			Developing Methods	

***Homework Assignments (HW)** and the **Exams** are due at 11:59pm on the date listed above.

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***Lab Assignments (LA)** are due on Sunday at 11:59pm of each week, with the exception of LA 11 that is due on the last day of class, a Friday.

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