

# Statistical Principles of Psychological Research Syllabus

Psychology 210, Section 001

Fall 2018\*

## Course Description

Psychology 210 introduces some of the statistical methods underlying psychological research. We focus on descriptive and inferential statistical techniques, and the manner by which they may be employed to design psychological experiments and analyze behavioral data. This is a Course-based Undergraduate Research Experience (CURE) class, meaning in this class we will conduct original research (see [gep.unc.edu](http://gep.unc.edu) for more info). It is our hope that by the end of this class that you see that not only does statistics offer a core background for understanding how psychologists investigate human behavior, it is a useful tool for navigating research claims and data you may encounter in your everyday life.

## Course Website

Please see the Sakai site for course information, required materials and grades. You will use Sakai to access required materials and complete assignments and online quizzes. Website: [sakai.unc.edu](http://sakai.unc.edu)

## Meeting Times

We will meet as a large group Tuesdays and Thursdays from 11:00 to 12:15 p.m. in Bingham 0103. Recitations will begin the first full week of classes. Additional recitation session information is available on the course site (see Resources > Your stats coaches...)

Recitation Section	Time	Location
601	M 4:40-5:30	Murphey 220
602	M 5:45-6:35	Murphey 220
603	W 4:40-5:30	Murphey 220
604	W 5:45-6:35	Murphey 220

\*Although changes are not anticipated, the instructor reserves the right to make changes to the syllabus or schedule including project due dates and test dates. These changes will be announced as early as possible.

## Instructional Team

Instructor: Viji Sathy



## Graduate Student Teaching Assistants (TAs)



Jason Hannay



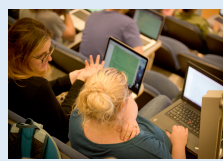
John West

## Undergraduate Learning Assistant (ULA)

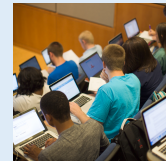


Atiyah Hamilton

## You and Your Peers



In this course you will contribute to your peers' understanding of the material. You are a key component to our class' success.



## Campus Resources

The [Learning Center](#) offers a variety of services in addition to peer tutoring for Psyc 210. Additionally, the [Writing Center](#) is available to assist with papers. Other resources you should seek out are [Career Services](#) and [Undergraduate Research](#). If you experience an emergency this semester, please contact the [Dean of Students Office](#). They will notify all of your instructors so that you will not have to. You have paid for all of these wonderful resources, please use them!

## Course Schedule

The schedule for this term can be found at <http://tinyurl.com/210springschedule>. The schedule contains topics for discussion by date, information about reading/videos required for class meetings, deadlines for graded work, as well as links to supplemental notes and practice problems.

## Contacting Us

Besides the many times to meet us live (recitation sections, class, and office hours) throughout the week TA's (and students!) will be available to answer questions online. In this course we will use Piazza for correspondence (sign up here: [piazza.com/unc/fall2018/psyc210](http://piazza.com/unc/fall2018/psyc210)). If your question pertains to a private or sensitive matter it can be sent to me: [viji.sathy@unc.edu](mailto:viji.sathy@unc.edu).

Piazza should be used for any purpose including logistics or technological questions (when class will meet, recitation times/locations, missed assignments, polleverywhere, SPSS, Java, etc.), concept questions (questions related to the subject of the course, quiz questions, etc.), and project questions. If you know the answer to a question, please post it! When Piazza is used well, you can get prompt helpful feedback from both peers and instructors. From Monday-Thursday, if you send a question through Piazza you should expect a response within 24 hours. From Friday-Sunday and on holidays you should expect a response within 48 hours. Please note if the question is particularly complex, you might be directed to a recitation or office hour session. If you send in a question and do not get a response in the specified time, please email me at: [viji.sathy@unc.edu](mailto:viji.sathy@unc.edu).

Office hours and locations can be found on the course site under **Resources > Your stats coaches**. Your TAs and I will host office hours weekly and we will offer additional hours near exam times.

All TAs will be available for office hours each week and you are welcome to attend any TA's office hours and do not need to be registered in their section to attend. The room for their office hours can accommodate many students, so please use this as a time to request review of topics or simply as a "study hall" as you work through assignments or quizzes.

Dr. Sathy will be available for office hours through the Sign-up tool in Sakai. Please use this as an opportunity to introduce yourself! If you have questions that you feel will exceed the allotted appointment time, feel free to reserve more than one appointment. My office is in Davie room 332. Email is preferred, but emergencies come up, so contact me at 917-232-8956 between 7am-11pm.

We hope that all of you take advantage of office hours to talk about the course, the homework, or just chat. Not sure what to do in office hours? See tips [here](#) and [here](#). Want some tips related to email? Read [this](#) and [this](#).

What You Will Need

A commitment to succeed in the course by 1) preparing for class, 2) actively participating in class, 3) practicing concepts after class (see section for how to do well in this course)

Laptop: At least once a week, possibly both days in class, we'll be using online resources, collecting and analyzing data, conducting research, completing assignments and online quizzes. You will need to bring your laptop to class. You will be asked to put your laptop away when it is not in use.

Cell Phone: We will be using an online polling site in class for participation. Please plan to use either your cell phone or laptop to submit responses. Instructions for registering for poll everywhere can be found here: <https://help.unc.edu/help/register-for-poll-everywhere-students/>. We will also be using a new cell phone app for attendance called UNC Check-In. Instructions can be found here: <http://help.unc.edu/help/unc-check-in-app-faq/>.

Calculator: You will be asked to use a non-graphing non-statistical calculator in this class. The calculator should be able to do basic functions, such as taking a square root and simple arithmetic functions, but NOT statistical functions. Only basic calculators will be allowed during exams. I will have some available for loan as well.

Access to SPSS. We will be using SPSS in class and for assignments. SPSS is a very user-friendly statistical software package. My intention is to give you the opportunity to experience statistical computing as it is done in the field, and to give you some experience that will be useful for future coursework and the work force. SPSS can be accessed without a license through virtual lab or the Odum Institute on campus (see Resources > SPSS > Accessing SPSS or <https://its.unc.edu/resource/virtual-lab/>).



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Advice from Former Students

In these boxes you'll find comments collected from students. They were asked to provide advice, and here is a sampling with an emphasis on most frequently occurring themes.

*I learned how to be a better student watching the videos before class and coming prepared for the quizzes made a definite difference in my learning experience in this class. I never really felt lost with the material because I was always prepared.*

*Keep up with the material and go to recitation. You'll be fine! ☺*

*Not only did I learn what I expected from a statistics course, but I learned that staying on top of the work and dedicated to the work will keep you going longer and stronger than otherwise. STAY ON TOP OF THE WORK & YOU'LL DO GREAT!*

*Watch every video and use every extra resource that is given to you. Study hard and have fun!*

*KEEP UP WITH THE VIDEOS!! Don't just play them while doing something else. Take notes and pay attention while watching them. All the resources provided seem overwhelming at first, but use them. They're there for a reason.*

*I learned that hard work trumps talent any day. Statistics doesn't have to be a foreign subject. I learned that SPSS is my friend and can be very valuable at times.*

*Watch the videos! Take notes on videos and pay attention in class. Go to class! And go to recitation! It is super helpful. Good luck!*

*Watch the videos, come to class, go to recitation. Difficult content but possible to do very well! Believe in yourself!*

What is Recommended



Videos/Screencasts: In this course, you will have access to videos for each topic. The course schedule indicates which topics you should be familiar with prior to coming to class. You have the choice of using either the videos or books (information below) to prepare. Data from previous semesters indicate that most students watch the videos, but some prefer reading about the material. You will be quizzed on the material in class. Curious about why I aim to provide free materials? Read [this](#) and [this](#).



Optional Books: There are a number of introductory textbooks that will work for this course. Here are a few I would suggest:

- [Lane's Introduction to Statistics](#). This is offered free in a number of ways: online, downloadable pdf, interactive text for iOS users, and mobile use. <http://onlinestatbook.com>
- [OpenStax](#). This is also free and available in multiple formats.
- Privitera, G. J. (any edition). [Essential Statistics for the Behavioral Sciences](#). You are NOT required to purchase this book. Copies of this book are also available at the undergraduate library reserves if you choose to wait and decide if it would be helpful to you. This book offers a number publicly available materials on their [site](#).



Topic Notes: I will post skeletal notes on each topic we will discuss on Sakai (Resources > Topic Notes). The notes often contain practice problems that you will see in videos. You may find it helpful to view the notes as you watch videos in addition to printing and bringing the notes to class (or bringing your laptop to access them). I do not provide ppt slides. Want to know why? Read [this](#) and [this](#).



See Sakai for additional online resources in this course. There are many non-graded practice opportunities online to assist you in your learning.

Accommodations

UNC-CH provides accommodations for any student with documented disabilities or medical conditions. If you require accommodations, please contact Accessibility Resources & Services at <https://accessibility.unc.edu>. In general, I ask that you schedule exams at the same time the class meets. I will upload all of the materials necessary and there is no need for you to make additional arrangements to deliver the exam.

Prerequisites



Psyc 101 is a prerequisite to this course. Although the course does not emphasize mathematics, knowledge of the basics of algebra (the ideas of equations and manipulation of variables) and geometry (plotting points on a plane, the equation of a line) are necessary; if you feel ill-prepared in any of those areas, a quick review might be useful (See book appendices for reviews).

### Course Requirements

**Exams (Exam 1: 20%, Exam 2: 20%, Final Exam: 35%):** Your exams will be administered in the large class meeting. The final exam will be cumulative and is required of all students. The final exam will replace an Exam 1 or 2 grade if it is higher than that grade (the replacement will only be made for one exam and not both). If you miss need to miss an exam for a University-approved absence, you should contact me in advance to schedule the make-up at the University's testing center. The make-up exam will not be the same format or length.

**Quizzes (5%):** Throughout the semester there will be short quizzes to help you better understand concepts in this course. You will find these quizzes on Sakai. Although you will be allowed to use your books and notes during the quizzes, I recommend that you attempt them without any guidance first and then consult additional resources when necessary. You may also work with peers or ask TAs or ULAs for guidance on quiz questions. Quizzes cannot be made up, and will be automatically taken down after the deadline (see Sakai for more details about quizzes). It will be your responsibility to ensure that Sakai records a grade in the grade center after you have completed each quiz.

**Assignments (10%):** Assignments will be posted to Sakai, and submitted in Sakai (unless otherwise stated). It is your responsibility to ensure that that your completed assignment is submitted prior to the deadline. It is also your responsibility to make sure what you have uploaded is the correct document and format (pdf files only). You are encouraged to work together on your assignments, but be sure that you understand the material and your write-ups must be independent. If you submit an assignment after the deadline, there is an automatic 1-point deduction (assignments are worth 4 points each). Additionally, there is a 1-point deduction for each day it is late. For tips on storing and backing up your work, see [this](#).

### Just for Fun

Join us!

Facebook: [Psyc 210 and 270](#)

Twitter: [@vijisathy](#)

Snapchat: vs9999

LinkedIn: [Viji Sathy](#) (alum group)

Pinterest: [www.pinterest.com/vijisathy/statistics-science-fun](#)



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### Advice from Former Students

*It's really important to do all the work and do it well. While it doesn't seem like the assignments and quizzes make up a huge portion of the course, understanding them makes the exams much easier.*

*Watch the videos and go to recitations. You can't be told that enough. It is crucial to your success. Have fun!*

*Come to class prepared, go to recitations and watch all of the videos!!! If you do this and concentrate in class you will do just fine.*

*I've learned that statistics matters, both to psychology and to the world at large. This course has been very hands on, and I enjoyed being able to work with real data.*

*Keep up with the videos. It will save your life in this class.*

*Come to class prepared, go to recitations and watch all of the videos!!! If you do this and concentrate in class you will do just fine.*

*If you do all the work and pay attention you'll actually get the material and do well.*

*Even if you don't get an A in the course, you will still walk away with a wealth of information you didn't have before. This is a hard class, but it is worth it.*

### Course Requirements (cont.)

**Data Analysis (Research) Project (5%):** You will collect, analyze data and report findings for our class research project. The project and interim deadlines and will be graded. Details will be provided on Sakai.

**Professionalism (5%):** In the first couple of class meetings we will work together as a group to determine what constitutes professional behavior. It will include but not be limited to: attendance and participation in class, group work, and digital etiquette.

Learning statistics is a cumulative process that requires patience, persistence and focus. It may be difficult to catch up if you miss class, do not keep up with the readings/videos, actively participate and turn work in regularly. Your full and active participation is required to succeed.

**Recitation (+2%):** Recitations provide an opportunity to work in a smaller setting on assignments and complete additional practice. You can earn a bonus in the course by participating in recitation. To earn the maximum bonus, you must be present at 90% of recitations for the full 50 minutes. Partial credit is available, and will be outlined on Sakai. Please note: this does not mean recitation is optional!

### Grades

Your final grade will be based on a combination of the course requirements and will be weighted as indicated above and converted to a percentage. Because extra credit is offered, your grade will not be rounded (rounding only impacts a few students, but extra credit is available to all). Letter grades will follow the standard scale:

A = 93.00-100.00%	C+ = 77.00-79.99%
A- = 90.00-92.99%	C = 73.00-76.99%
B+ = 87.00-89.99%	C- = 70.00-72.99%
B = 83.00-86.99%	D+ = 67.00-69.99%
B- = 80.00-82.99%	D = 60.00-66.99%
	F = below 60%

### Honor Code

Your participation in this course comes with the expectation that your work will be completed in full observance of the Honor Code (<http://honor.unc.edu/>). Unless otherwise arranged, your presence in class is a requirement for participation. You should not read or in other ways use written work that other students have prepared for PSYC 210 in completing your assignments, quizzes or exams. This applies to work done by other students in your own section, in other sections, or from past semesters. Furthermore, you are not to copy or post course materials (notes, videos, etc.) online without the instructor's permission. Please report any violations that you observe.

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### How to Do Well In This Course

Participation & Class Conduct: You are expected to attend and come prepared and attentive to every class and recitation meeting. The class time will be used to review concepts, conduct additional practice, and work on assignments. The recitation time will be used to answer any questions you may have, help you with assignments, and review material. The course is designed to optimize learning by requiring [active participation](#), [distributed practice](#), and [frequent feedback](#). [Here's](#) a good piece summarizing these and more. Please note:

Please arrive on time to class. If you must arrive late or leave early, please enter through the back door and sit in the back to minimize disruption to fellow students and the instructor. You can move to your seat at the next group activity.

Use of your cell phone and laptop will be restricted to class activities (again to be kind to your classmates!). While I recognize that you are an excellent multi-tasker, research suggests that your peers are not. Please be respectful of your classmates and restrict your use of digital devices to course content. Please read [this](#) for rationale as well as suggestions for apps to help you stay on task such as [this](#), [this](#) or [this](#).

Participate! This may be a large class, but that doesn't mean you can't ask questions or offer answers. We want you to get the most out of the course and that requires active participation from everyone.

Because the course is cumulative, it will be imperative that you keep up with the course work and submit all work when it is due. Late work is subject to hefty penalties to accrue daily.

Familiarize yourself with the course site as soon as possible. There are a lot of resources on the site, spend some time browsing it and making use of the resources that will help you best learn.

If you cannot attend a class or recitation meeting, talk to other students about what you missed. After you get notes from your classmates, see me or your TA if you have specific questions about the material.

Budget 6-9 hours of time per week on the course material outside of class. The actual number may vary according to how easily you process the material and may also vary from topic to topic.

Use your resources wisely: Your TA's, ULA's, and I are willing to give you any additional assistance that you may need, but please be mindful of our time, and make a solid attempt to understand the problem before coming to see us.

### Monitor Your Progress

Remember, learning statistics is a cumulative process, and if you find yourself getting behind, please let one of us know as soon as possible. We're here to help you learn the material, so use us!

### Advice from Former Students

*This course has truly been carefully designed with our success in mind: you are given opportunities to correct mistakes, which is amazing! I've learned so much more this way. I bombed the first exam, but I did very well on the second and feel confident about the final!*

*If you do all the work and pay attention you'll actually get the material and do well.*

*Go to class, ask questions, and talk out the conceptual stuff with a friend.*

*If you are feeling at all anxious about this course, stop and take a deep breath for me. There is no such thing as being "bad at math," & if you work and study hard, you'll succeed. p.s. Watch ALL of the videos. Trust me.*

*Statistics is not a monster that is untackelable but a key that can be used to unlock many doors in your future. I cannot stand math, but I like statistics. I never thought I would say that. Study hard and keep on track, it will help you. I learned that the hard way.*

*Watch the videos and go to recitations. You can't be told that enough. It is crucial to your success. Have fun!*

*I learned that an enthusiastic group of teachers and students could turn even a large class into a fun, hands-on learning environment. I also learned that statistics isn't so hard if you do the work.*

*Dear future student,  
Keep an open mind.  
Sincerely, Someone  
who did*

### Student Success

Your instructional team supports the thrive @Carolina initiative. We believe **all** students thrive when they:

- Take full advantage of the breadth and depth of our curriculum
  - Set academic and personal goals
  - Take responsibility for their education, choices, & decisions
- We want you to succeed and thrive at Carolina!



I care about you (yes, really). Every aspect of this course is designed to help you successfully complete the learning objectives. You can trust me to have your best interests at heart. My office hours is always a safe space for you, as is our classroom. If you ever feel that isn't true, *talk to me*. If anything is keeping you from doing your best work, *talk to me*. I can't promise a solution, but I can promise to do whatever I can to help you find the resources you need. *Talk to me.*

### See, Say, Do Something



We're happy you are here and eager to learn. Despite our best intentions to follow a plan, life may throw us a curveball. If you or someone you know is experiencing some distress or you are concerned about the well-being of a student, you may contact a member of the instructional team or report it here: <https://deanofstudents.unc.edu/carereport>. It is important to support one another. If you see something, say and do something. Please use this app for emergencies or call 911: <http://dps.unc.edu/carolinasafe/livesafe/>



### Respect

Your instructional team affirms our commitment to the following, and encourage you to as well:

- respect the dignity and essential worth of all individuals
- promote a culture of respect throughout the university community
- respect the privacy, property, and freedom of others
- reject bigotry, discrimination, violence, or intimidation of any kind
- practice personal and academic integrity and expect it from others
- promote the diversity of opinions, ideas, and backgrounds that is the lifeblood of the university.

### Congratulations!

Lastly, I'd like to share this quote with you because I share this philosophy:

*"We can all work together to create and sustain the kind of community where all feel welcome, respected, and free to pursue their dreams and goals and become their best and truest selves. I want to make it clear that no member of our community is less important than any other. None of us should be made to feel — in our classrooms, libraries, or laboratories, or in our offices or residence halls, or in any public or private place — that our presence here is anything other than an achievement rightly earned and celebrated."* Chancellor Folt

Congratulations on your achievement. Welcome to the course. We hope it will be a great semester for all.

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