
BIOL 350: Foundations of Biostatistics

Syllabus Spring 2021

This is a synchronous online course that meets
Mondays and Wednesdays, 2:30 – 3:45 PM EST, using Zoom

What is this course about?

Generally speaking, biostatistics is the application of statistics to the life sciences. In this class, you will use the biological knowledge that you have gained from other classes and experiences to identify and understand patterns in biological data. We will be working in the free R programming environment, a reliable and powerful tool for statistical computing and visualization, because it is used in many scientific disciplines. This course is also about learning and practicing skills for today's careers. Expect an opportunity to challenge yourself and be rewarded for your growth. You'll also be practicing the 4Cs: communication, collaboration, critical thinking, and creativity.

What is the format of the course?

Learning in this class is a combination of self-paced work—such as readings, video lectures, and assignments—along with live group activities during synchronous sessions—such as paired programming exercises. After the first day of class on Monday, February 1, we will have scheduled activities only on Wednesdays. However, Monday sessions should be reserved for group work and asking questions during drop-in virtual office hours.

Who will be helping you to learn?

Instructor: Dr. Suann Yang

Pronouns: She/her/hers

Office: ISC 256

Email: yang@geneseo.edu

Drop-in hours (ONLINE only): Mondays 2:30 – 3:45 PM EST

By Appointment hours (ONLINE only): Thursdays 2:30-4:00 PM EST

Teaching assistants: Usman Chaudhry, Maya Craig, Ethan Warick

We will schedule regular drop-in hours after the first week of classes

What will you learn?

Upon completion of this course, successful students will be able to:

1. Explain how and why biologists use statistics
2. Apply the principles of experimental design to study biological phenomena in an ethical manner
3. Evaluate the design of research experiments, relate an experiment's design to the statistical analyses that can be conducted on the data collected, and identify any limitations on generalizability
4. Conduct the proper statistical analysis of different types of biological data
5. Use computers to do statistical analysis, particularly using the R programming language
6. Ensure reproducibility of data analyses by applying the principles of modern data management
7. Interpret, present, and communicate the results of statistical tests and analyses of data using the conventions of the biology discipline
8. Demonstrate competency in fundamental science skills, such as solving problems and working in teams

The **learning outcomes** of this course, listed above, support your progress toward the Geneseo Learning Outcomes for a Baccalaureate Education (GLOBE), particularly *Broad and Specialized Knowledge* and *Intellectual and Practical Skills* (critical thinking; communication; quantitative, computational, and symbolic reasoning; informational and digital literacy; creativity and creative thinking; leadership and collaboration; diversity and pluralism; and global awareness and engagement).

This course also helps you achieve these learning outcomes of the biology major:

- Students will have the knowledge base and intellectual (conceptual) framework to use reasoning and problem-solving skills to; (1) read critically, (2) evaluate support for competing hypotheses, and (3) critique experimental design.
- Students will have the laboratory and inquiry skills and technical ability to formulate hypotheses, design and run experiments using instruments to test their hypotheses, and analyze and interpret the results. They will be able to build on earlier work to design further experiments.

- Students will be able to communicate biological ideas from literature or their own laboratory investigations to audiences of biologists and non-biologists in a variety of formats including written reports, poster and oral presentations.
- Students will recognize the importance of scientific integrity and ethical research and applications of biology to science policy. They will be able to work independently and in teams for life-long learning.
- Students will be able to demonstrate a broad and diverse background in biology and related sciences and a strong foundation for graduate and professional programs of study or employment.

What are the required materials for this class?

1. **Laptop** and reliable **Internet** access
2. A reasonably quiet and comfortable **location for using Zoom** to participate in our synchronous sessions.
 - a. Headphones/ear buds are recommended.
 - b. Check that your laptop's camera is working. When your Internet connection is unstable, using audio only can improve the quality of the call.
 - c. You are welcome to use a virtual background that is suitable for a professional meeting environment.
3. Daily access to our course **Canvas** site. This is the starting point for everything you need to do in the course, and the primary mode of communication used by the instructional team to send you regular announcements and updates.
4. This **software** installed on your laptop
 - a. R software (free download, <https://cran.r-project.org/>)
 - b. RStudio (free download, <https://www.rstudio.com/products/RStudio/#Desktop>)
 - c. Microsoft Excel (free to all Geneseo students, <https://wiki.geneseo.edu/display/cit/Software+at+Geneseo>)
5. **Required textbook:** *OpenIntro Statistics*, 4th ed. by David M. Diez, Mine Çetinkaya-Rundel, and Christopher D. Barr. Free PDFs of each chapter can be found on our Canvas course page. See the campus bookstore if you want a physical copy, which can be rented or purchased for \$16 or less.
6. **Recommended, but not required:** *A Primer in Biological Data Analysis and Visualization Using R* by Gregg Hartvigsen. You may have this already from another course, such as BIOL 116 or 203.

How will you know that you are learning?

Learning to do statistics requires just that - *doing statistics*. Each week, expect to complete a background reading and/or watch short videos on your own. After you have prepared with the reading and/or videos, Wednesday's class meeting will begin with a short demonstration, followed by getting started on the week's tutorial or concept check. A problem set or other applied assignment will follow to wrap up each topic. Every three weeks, we'll test your skills in R with live coding quizzes.

You will receive feedback on your progress in three major categories: **assignments, quizzes, and a collaborative project**. All of these activities are opportunities for you to learn new concepts, and apply and integrate your understanding.

Grading scheme

Item	Percent	Notes
Assignments	60	Tutorials, concept checks, problem sets, etc.
Live coding quizzes	20	4 total, all require the use of R
Collaborative project	20	Includes deadlines throughout semester & peer evaluation
Statistics in the Media		Regular extra credit opportunity (limit of 7)

Components of your grade

1. **Assignments:** To help you master each topic, I will assign video lectures, readings, code tutorials, problem sets, and other activities every week. These will be worth a range of point values (0 to ~20), and the proportion of the points you earn out of the total (~200) will be used to calculate your overall assignment score.
2. **Live coding quizzes:** Every three weeks, you sign up for a 10 minute block of time for a live coding quiz (see exact dates in schedule; all are Wednesdays). During your quiz time, you will be assigned a small set of coding tasks. To take the quiz, you will screen share with your quiz proctor (instructor or TA), and we will follow along as you complete the coding tasks. Working with R under a time constraint is naturally stressful for many students. To help you prepare yourself for this part of the quizzes, I will post the upcoming quiz's data set (a CSV file) on the day before each quiz, along with a list of possible coding tasks that you should be prepared to complete.

3. **Collaborative Data Analysis Project:** In this project, you will work in assigned teams to address a biological question that is related to one or more of these United Nations Sustainable Development goals: *Good Health and Well-being*, *Climate Action*, *Life Below Water*, and *Life On Land*, and using one or more of the public data bases we have identified for you. Some of our class meeting times will be devoted to developing, discussing, and working on your project. There are multiple components and deadlines throughout the semester: i) preliminary proposal, ii) peer reviews of proposals, iii) cleaning and processing the data and constructing exploratory graphs, iv) revised proposal v) analysis plan, vi) individual analysis report, vii) group analysis report, viii) final oral presentation, and ix) peer evaluations throughout the semester. Adjustments to individual scores will be made based on final peer evaluations. To facilitate group development, you complete a survey on your interests, experience, and availability at the beginning of the semester. I will use the results of this survey to assign you to your project teams.

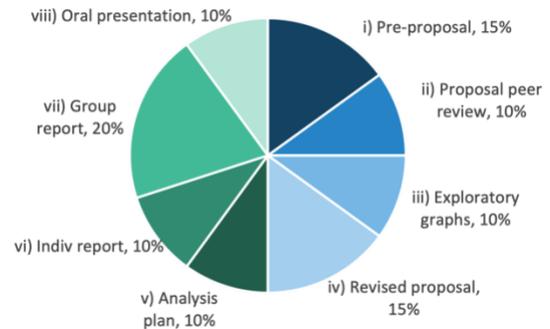


Fig. 1. Breakdown of collaborative data analysis project by i-iv planning (blues) and v-viii execution (greens) steps, in one of the only pie graphs you'll see in this class.

4. **Statistics in the Media:** You can find statistics everywhere! In this extra credit assignment, you will find an example of statistics usage in the media, and summarize and critique it. There will be seven windows of opportunity for you to complete this assignment for extra credit points (submit via Canvas). The article, blog post, etc. must be published within each window of time to be valid. Each example must be unique; only the first student to turn in a particular example will get the credit. You may want to consider this extra credit opportunity like disaster insurance: invest the time in completing the assignment from the first opportunity, just in case you need these points later.

Final course grades will be determined as shown here:

A 93.3 - 100%	B+ 86.6 - 89.99%	C+ 76.6 - 79.99%	D 60.0 - 69.99%
A- 90.0 - 93.29%	B 83.3 - 86.59%	C 73.3 - 76.59%	E <59.99%
	B- 80.0 - 83.29%	C- 70.0 - 73.29%	

What are our shared responsibilities to our learning community?

Students, teaching assistants, and the professor have communal responsibilities to our community, to promote learning, maintain a respectful environment, and prioritize our health and wellbeing during this stressful time. In our classroom, we are preparing you for not only other courses in the biology program, but also for your professional career.

Responsibilities to promote learning

1. **Making space for everyone to contribute.** Scientific innovation arises from the insights of a diverse community. The unique talents, experiences, and contributions of each individual in our class are crucial and necessary. Be ready to learn from others and be willing to teach what you can in return. As in any learning endeavor, we naturally may make mistakes despite good intentions. Each person will do their best, and believe that others are doing their best, to learn from and correct mistakes that are harmful to others.
2. **Synchronous session attendance.** Accessing course materials online may be challenging - we've all experienced things like unforeseen emergencies and internet disruptions. Although this course includes some "live" or synchronous course activities, we can all be understanding about the challenges posed by the COVID-19 pandemic and the limits of technology. If you miss a synchronous session, please let me know as soon as possible so that we can discuss ways to keep you on track. If you are experiencing longer-term disruptions, please be proactive in communicating with me and contact the Dean of Students if you expect to be out for an extended period of time. If I need to cancel a synchronous session because of technical problems or other emergencies, I will use Canvas to inform you as soon as I can.
3. **Preparation.** Science is a process of discovery, and we will engage in this process during every class. Be prepared to take an active role in learning the material and practicing new skills. The course is designed with a workload that is typical for 3 credit classes: about 9-10 hours per week. Please check Canvas frequently for updates on what you need to be ready for each class. I will also use Canvas to send you weekly announcements to remind you of the tasks to be completed each week. While we will have scheduled activities only on Wednesdays, Monday sessions should be reserved for group work and asking questions during drop-in virtual office hours.
4. **Timeliness and deadlines.** Signing into Zoom meetings on time and completing our work in a timely fashion are vital elements for our online class. Posted deadlines and

your own personal deadlines keep the work in an online class manageable. Please be considerate to yourself and your teammates and create mini-deadlines well in advance of the major deadlines. Likewise, do your best to stick to deadlines and meeting times that are planned by you and your team, and communicate immediately if something interferes with those plans. The instructional team will also return feedback on assignments promptly, to help you monitor your learning. Occasionally, I will only be able to offer general feedback on the work of the class as a whole, especially during the month of advising. If you discover that a due date might be a problem, you should contact me immediately with a proposed solution so that we can negotiate.

5. **Commitment.** Everyone will dedicate ourselves to doing our best work within the circumstances that we're experiencing. The COVID-19 pandemic is only one of several situations that anyone in our community is managing. Thus, we should all try to promote an effective learning environment by minimizing distractions and designing a place to work that helps us to focus and stay on task. In addition, we should also try to help others to stay on task, especially during class synchronous sessions, or time we have scheduled to work with our teammates synchronously.

Responsibilities to maintain a respectful environment

1. **Communication.** Everyone is expected to check their email at least twice a day, and use email, Canvas, or other mutually-agreed upon methods to communicate with each other. Please make sure to set Canvas notifications to send you emails with updates, and set aside time to read these so you don't miss anything important. You can also meet with professors and teaching assistants in drop-in hours or by appointment.
2. **Uphold the Student Code of Conduct.** Plagiarism and other forms of academic dishonesty (cheating, turning in another student's work as your own) is not tolerated at SUNY Geneseo. Consulting with other students for individual assignments is fine, but you must each produce original written answers or code (no copying and pasting). Check with the instructional team if you are not sure where the line between collaboration and copying stands on any assignment. Evidence of plagiarism and/or academic dishonesty is grounds for a score of '0' on any assignment and further action including notifying the department chair, which can result a report filed with the Dean of Students. For full details of the Student Code of Conduct, please see the Student Handbook (<https://www.geneseo.edu/handbook/student-code-conduct>).

3. **Respect copyright and licensing.** All materials used in this course, including lectures, slides, videos, and handouts, have specific licensing and copyright restrictions that identify how they can be used, distributed, and adapted. The original work created by me, your instructor, is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](#). Materials created by other authors have their own licensing and copyright restrictions. Please do not violate the restrictions we have put on our intellectual property. This includes, but is not limited to, transferring files to websites such as StudyBlue and Course Hero, storing old tests in sorority/fraternity test banks, and passing on assignments to friends who may take the course in the future. Be aware that UUP (Union of University Professionals, the union representing faculty on this campus) is seeking to take legal action against groups who violate copyright, and that posting or selling copies of materials to such groups may put a student in legal jeopardy.

Responsibilities to prioritize health and wellbeing in a stressful time

The changes brought on by COVID-19 have impacted us all in a number of ways, and will continue to do so at various times and to varying degrees during the upcoming semester. Your health and wellbeing are foundational to your ability to learn, and if you find that you are feeling unwell (physically or mentally) and it is impacting your ability to complete your coursework, please reach out. Because the learning environment will be different than it has been in the past, the indicators that usually let you know something is wrong may not be as clear to you or those around you as they would be during a typical semester. Additionally, the ways in which you normally engage in self-care may have been disrupted. Please remember that it's never too late to ask for help. The Dean of Students (585-245-5706, https://www.geneseo.edu/dean_students) can assist and provide direction to appropriate campus resources. The college also has collected resources in a Coping with COVID webpage

- (<https://www.geneseo.edu/health/copingwithcovid>).

In a similar way, I will occasionally ask for some patience and flexibility on your part. The pandemic is affecting faculty as well as students and creating demands that would not be present in an ordinary semester. If I am slow responding to an email or taking more time than usual to post recordings of our synchronous sessions, please be patient (and feel free to send me a gentle 'nudge'; I will not be offended). You will never suffer any disadvantage in the course because of delays on my part. Remember that we are all in this together.

How else does this class support your success and well-being?

At Geneseo, we strive to support your academic success and well-being. This course works with and complements the resources available campus wide, such as academic support services, accessibility, mental health, diversity and inclusion policies, and many more.

Getting Help with Online Classes and technology

CIT has developed a number of resources that can help you formulate good strategies for success in online courses (<https://www.geneseo.edu/cit/student-resources-remote-learning>). These include general strategies for keeping on track with your courses as well as more specific resources about learning experiences that you may encounter in an online course. The Office of the Dean for Academic Planning and Advising has also introduced the new KOALA (Knights' Online Academic Learning Assistance; https://www.geneseo.edu/dean_office/koala) course support resource. Throughout the semester, if you need help with online learning strategies, you can contact the KOALA support desk, which will assist you with identifying resources and strategies for success.

We will be using computers in our class all the time. For everyday troubleshooting in R, we have the instructor, TAs, and each other. For other assistance, CIT also provides a range of technology support resources (<https://www.geneseo.edu/cit/helpdesk>). When you are in Canvas, the Help menu on the left side of the screen will also direct you to a number of CIT supports, including self help resources and options to request technology assistance. CIT also provides free access to over 7,500 online tutorials for software, digital tools, web development, programming, and design through [LinkedIn Learning](https://go.geneseo.edu/linkedinlearning) (<https://go.geneseo.edu/linkedinlearning>).

Library Research

Milne Library has an award-winning staff trained in finding the best information. They have created online research guides, self-help databases, and are available for individual consultation. Research Librarians are available for walk-in consultations and students may request appointments with staff experts in particular fields. The Librarian for our class is Dr. Jonathan Grunert.

Library renovations in Fraser are complete! Some library services will continue to be offered remotely, however. Dr. Grunert, along with the other librarian liaisons, will be working remotely for the Spring 2021 semester.

- Students, faculty, and staff will be able to schedule research consultations with librarians via Zoom or another medium, using the same link as in past semesters: geneseo.edu/library/researchconsultations

- In lieu of in-person drop-in hours, the librarians are staffing LibChat, a service that allows for online, chat-based synchronous communication. LibChat is available Mondays–Fridays. Access it by clicking on the green owl icon, which is located throughout the library website.
- While electronic resources will continue to be accessible, Milne's physical collection will have limited access. Faculty, staff, and students are encouraged to use IDS to borrow materials from other libraries. For information about IDS and library services as a whole, see geneseo.edu/library/library-service-information

Accessibility

All course materials are available on Canvas and I've made every attempt to ensure that they are accessible to everyone. If you have difficulties accessing any materials (including needs for alternative formats), please let me know as soon as possible and I will rectify the situation.

SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. The Office of Accessibility will coordinate reasonable accommodations for persons with documented physical, emotional, or cognitive disabilities, as well as medical conditions related to pregnancy or parenting. Students with letters of accommodation should submit a letter to each faculty member at the beginning of the semester and discuss specific arrangements. Please contact the Office of Accessibility Services for questions related to access and accommodations: Erwin Hall 22 or call (585) 245-5112 or email access@geneseo.edu. Visit the Office of Accessibility Services for more information www.geneseo.edu/accessibility-services

- **Student responsibility:** Please submit your letter of accommodations to me at the beginning of the semester and make an appointment to discuss arrangements.
- **Instructor responsibility:** I am committed to working with you to figure out how to create a just learning environment while meeting the learning outcomes of the course. Unless you communicate otherwise, I will keep all accommodations confidential.

Well-Being

Prioritizing well-being can support the achievement of academic goals and alleviate stress. Eating nutritious foods, getting enough sleep, exercising, avoiding drugs and alcohol, maintaining healthy relationships, and building in time to relax all help promote a healthy lifestyle and general well-being. Concerns about academic performance, health situations, family health and wellness (including the loss of a loved one), interpersonal relationships and commitments, and other factors can contribute to stress. I strongly encourage you to communicate any issues related to your well-being to

me or other faculty and staff, and seek support before you experience unmanageable stress or have difficulty with daily functioning. Dr. Leonard Sancilio, Dean of Students (585-245-5706), can assist and provide direction to appropriate campus resources. For more information, see www.geneseo.edu/dean_students.

Mental Health

I consider mental health to be no less important than physical health with respect to learning. As a student, you may experience a range of challenges that can impact your mental health and thus impact your learning; common examples include increased anxiety, shifts in mood, strained relationships, difficulties related to substance use, trouble concentrating, and lack of motivation, among many others. These experiences may reduce your ability to participate fully in daily activities and affect your academic performance. SUNY Geneseo offers free, confidential counseling for students at the Lauderdale Center for Student Health and Counseling (call 585-245-5716 to make an appointment), and seeking support for your mental health can be key to your success at college. You can learn more about the various mental health services available on campus at health.geneseo.edu.

Food Security

If you find that you do not have the financial resources to support your food and nutrition needs, you can access the Geneseo Groveland Food Pantry located at the First Presbyterian Church, 31 Center Street in Geneseo. Students can utilize the pantry once with no referral or contact with the College. At this visit they will be provided items that will address their basic needs for several days. If a student continues to face difficulties beyond their first visit to the pantry they should connect with Susan Romano, Director of Financial Aid to receive a brief letter that they will present to the staff at the pantry that verifies their need. If students do not have a FAFSA on file for any reason they should contact Dr. Leonard Sancilio, Dean of Students, to discuss their particular situation and options. The Geneseo Groveland Food Pantry is open on Tuesday: 10 AM - 2 PM, Wednesday: 4 PM - 6:30 PM, and Thursday: 10 AM - 2 PM.

Religious Observances and Class Attendance/deadlines

If you anticipate an absence or conflict with an assignment deadline due to religious observances, please contact me as early in the semester as possible to make alternative arrangements for those days that you'll miss. Student attendance in classes on religious holidays is governed by New York State Education Law 224-a (see <https://www.geneseo.edu/apca/classroom-policies>). See calendar of major religious observances https://www.cs.ny.gov/attend_leave_manual/030Appendices/B-CalendarofLegalHolidays/2020calendar.html

Bias-Related Incidents

"We are here to listen, to learn, to teach, to debate, to change, to grow. We should all be safe to pursue these goals at SUNY Geneseo while being who we are. Together, we commit ourselves to pluralism, cultivating a community that respects difference and promotes a sense of inclusion and belonging." As this excerpt from our Community Commitment to Diversity, Equity, and Inclusion states, here at SUNY Geneseo, we want to provide a space where everyone feels welcome to learn and grow in their identities as well as in their role as students, faculty, and staff. If in the unfortunate instance you experience an incident of bias, we encourage you to reach out to the Chief Diversity Officer (routenberg@geneseo.edu) and/or our University Police Department. In trying to create an environment that facilitates growth through diverse thoughts and ideas, reporting incidents of bias - including threats, vandalism, and microaggressive behaviors - can help bring a better understanding of our campus climate as well as provide opportunities for learning and restoring harm.

Proposed schedule outline

After the first day of class on Monday, February 1, we will have scheduled activities only during Wednesday class meetings. However, Monday class meetings should be reserved for group work and asking questions during drop-in virtual office hours.

The table below is we are aiming for. Assignments will be described in detail on Canvas. I may adjust the topics and dates during the semester; be assured I will inform you of any changes in a timely fashion.

Introduction to R (Feb 1 – 5)

Date	Day	What to do	What's due (11:59 PM)
2/1	Mon	Synchronous session (Zoom)	
2/2	Tues		
2/3	Wed	Synchronous session	
2/4	Thurs		Introduction to R tutorial/concept checks
2/5	Fri		

Designing Biological Research (Feb 8 – 12)

Date	Day	What to do	What's due (11:59 PM)
2/8	Mon	Synchronous session (Zoom)	Introduction to R problem set
2/9	Tues		
2/10	Wed	Synchronous session (Zoom)	
2/11	Thurs		Designing biological research tutorial/concept checks
2/12	Fri		

Getting to Know the Data (Feb 15 – 19)

Date	Day	What to do	What's due (11:59 PM)
2/15	Mon	Synchronous session (Zoom)	Project preliminary proposal Sign up for live coding quiz time slot
2/16	Tues		
2/17	Wed	Live coding quiz (Zoom)	
2/18	Thurs		Getting to know the data tutorial/concept checks
2/19	Fri		

The Data Life Cycle (Feb 22 – 26)

Date	Day	What to do	What's due (11:59 PM)
2/22	Mon	Synchronous session (Zoom)	Peer review of pre-proposal Getting to know the data problem set
2/23	Tues		

2/24	Wed	Synchronous session	
2/25	Thurs		Data life cycle tutorial/concept checks
2/26	Fri		

Hypothesis Testing (Mar 1 – 5)

Date	Day	What to do	What's due (11:59 PM)
3/1	Mon	Synchronous session (Zoom)	Project exploratory data analysis
3/2	Tues	Rejuvenation Day!	
3/3	Wed	Synchronous session (Zoom)	
3/4	Thurs		Hypothesis testing tutorial/concept checks
3/5	Fri		

Projects (Mar 8 – 12)

Date	Day	What to do	What's due (11:59 PM)
3/8	Mon	No class meeting	Hypothesis testing problem set Sign up for live coding quiz time slot
3/9	Tues		
3/10	Wed	Live coding quiz (Zoom)	
3/11	Thurs		Project concept checks Group peer evaluation #1
3/12	Fri		

Goodness of Fit and Contingency Tests (Mar 15 – 19)

Date	Day	What to do	What's due (11:59 PM)
3/15	Mon	Synchronous session (Zoom)	Final project proposal
3/16	Tues		
3/17	Wed	Synchronous session	
3/18	Thurs		Goodness of fit and contingency tests tutorial/concept checks
3/19	Fri		

Tests of Difference: Two Samples (Mar 22 – 26)

Date	Day	What to do	What's due (11:59 PM)
3/22	Mon	Synchronous session (Zoom)	Goodness of fit/contingency Problem set
3/23	Tues		
3/24	Wed	Rejuvenation Day! No class meeting	
3/25	Thurs		Two sample comparisons tutorial/concept checks
3/26	Fri		

Tests of Difference: More Than Two Samples (Mar 29 – Apr 2)

Date	Day	What to do	What's due (11:59 PM)
3/29	Mon	Synchronous session (Zoom)	All the statistical tests so far problem set Sign up for live coding quiz time slot
3/30	Tues		
3/31	Wed	Live coding quiz (Zoom)	
4/1	Thurs		>Two sample comparisons tutorial/concept checks
4/2	Fri		

Tests of Relationship: Correlation (Apr 5 – 9)

Date	Day	What to do	What's due (11:59 PM)
4/5	Mon	Synchronous session (Zoom)	All the statistical tests so far problem set
4/6	Tues		
4/7	Wed	Synchronous session	
4/8	Thurs		Correlation tutorial/concept checks
4/9	Fri		

Tests of Relationship: Regression (Apr 12 – 16)

Date	Day	What to do	What's due (11:59 PM)
4/12	Mon	Synchronous session (Zoom)	All the statistical tests so far problem set
4/13	Tues		
4/14	Wed	Synchronous session (Zoom)	
4/15	Thurs		Regression tutorial/concept checks
4/16	Fri		

Projects (Apr 19 – 23)

Date	Day	What to do	What's due (11:59 PM)
4/19	Mon	Synchronous session (Zoom)	All the statistical tests problem set Sign up for live coding quiz time slot
4/20	Tues		
4/21	Wed	Live coding quiz (Zoom)	
4/22	Thurs	Rejuvenation Day	
4/23	Fri		

Projects (Apr 26 – 30)

Date	Day	What to do	What's due (11:59 PM)
4/26	Mon	Synchronous session (Zoom)	Updated project analysis plan
4/27	Tues		
4/28	Wed	Synchronous session (Zoom)	

4/29	Thurs		
4/30	Fri		

Projects (May 3 – 7)

Date	Day	What to do	What's due (11:59 PM)
5/3	Mon	Synchronous session (Zoom)	Individual project report
5/4	Tues		
5/5	Wed	Synchronous session (Zoom)	
5/6	Thurs		
5/7	Fri		

Projects (May 10 – 14)

Date	Day	What to do	What's due (11:59 PM)
5/10	Mon		Group project report
5/11	Tues		
5/12	Wed		

Project Presentations (May 17, 3:30-6:00 PM EST)

Date	Day	What to do	What's due (11:59 PM)
5/17	Mon	Project symposium!	Group peer evaluation #2