Fall 2025

Introductory Biostatistics

BIOL 250

Section 1 - Tu/Th 11:00-12:15, ISC 131

Section 2 - Tu/Th 2:00-3:15, ISC 131

Welcome!

We are so glad you have joined our learning community and look forward to getting to know you. Your unique talents, experiences, and contributions are important to our class. Be ready to learn from others and be willing to teach what you can in return.

What is this course about?

> *Now more than ever, data analysis skills empower biologists to study complex phenomena and design solutions for the challenges we face today.*

This class provides you with an opportunity to gain a foundation in the knowledge and skills essential for understanding and analyzing data in the field of biology and health sciences. Biostatistics plays a critical role in modern biomedical research, clinical trials, public health, and epidemiology by providing quantitative methods to collect, analyze, and interpret data. But our course is not just about doing statistics! This course is also about learning and practicing skills for upper-level courses and today's careers: communication, collaboration, critical thinking, and creativity. This course is deliberately designed to focus on your individual growth as a learner. Expect an opportunity to challenge yourself and be rewarded for your growth.

Instructor

Dr. Suann Yang (she/her)

Office: ISC 256

Email: yang@geneseo.edu

Phone: 585-245-5311

Peer Mentors

Bryan DiLeo, Jason Pun, Kaelin Faery, Maya Tucci

Student drop-in hours (no appt. necessary)

In person (ISC 232)**:** Tu/Th 12:30-1:30 and W 12-1

You can always email yang@geneseo.edu for an appointment outside of these times.

Land acknowledgement

Acknowledging the original occupants of the land upon which SUNY Geneseo resides is essential to our understanding of our obligation to analyze and interpret data in a way that benefits all people. Furthermore, we share this land acknowledgement as a reminder to honor and express gratitude to those who are the traditional stewards of the land. The location of our classroom is on the homeland of the Seneca Nation of Indians and Tonawanda Seneca Nation. We will also be analyzing data collected from places where these original occupants and other Indigenous groups have lived and still continue to live. Please take some time to check out the Native Land app and/or websites such as sni.org to learn more about the community of more than 7,000 enrolled Indigenous Peoples.

Who will be helping you to learn?

INSTRUCTOR: Dr. Suann Yang (she/her)
OFFICE: ISC 256
EMAIL: yang@geneseo.edu (preferred, or use Brightspace)
PHONE: 585-245-5311 (make sure to write this down somewhere as a backup!)
DROP-IN HOURS (ISC 232, NO APPOINTMENT NECESSARY): Tu/Th 12:30-1:30 and W 12-1

PEER MENTORS: Bryan DiLeo, Jason Pun, Kaelin Faery, Maya Tucci

YOUR FELLOW STUDENTS: We can not only learn a lot from each other, we can also learn a lot by working with and teaching each other. After the first week of the semester, you will be assigned to a coding support group to help each other on assignments and also to collaborate on a final mini-project.

Our Commitment

> *Scientific innovation arises from the insights of a diverse community.*

The unique talents, experiences, and contributions of everyone in our class are crucial and necessary. As your instructor, I strive to create an environment where each person–myself included–is ready to learn from others and has the opportunity to teach what they can in return. As in any learning endeavor, we naturally may make mistakes despite good intentions. We will do our best, and believe that everyone will do their best, to learn from and correct mistakes that are harmful to others.

What will you learn in this course?

I have designed this course to enable you to integrate multiple bodies of knowledge with your personal experience and apply what you have learned, in a learning community that values you and your growth.

Course Learning Outcomes

We will work together to achieve these learning outcomes for INTRODUCTORY BIOSTATISTICS:

1. Describe basic concepts and principles of biostatistics with an emphasis on parametric and nonparametric tests.
2. Develop proficiency in selecting and applying appropriate statistical tests for various types of data.
3. Practice interpreting and communicating statistical results in biological and health sciences.
4. Conduct basic statistical analyses independently using statistical software.
5. Cultivate a supportive learning community that fosters belonging and empowers all members.
6. Reflect upon our own short- and long-term learning goals, our progress toward them, and how to take action to enrich our own growth.

GLOBE Learning Outcomes

This course support your progress toward the Geneseo Learning Outcomes for a Baccalaureate Education (GLOBE), particularly Quantitative, Computational, and Symbolic Reasoning. In this course, we will focus on your ability to:

1. interpret and draw inferences from appropriate mathematical models such as formulas, graphs, tables, or schematics;
2. represent mathematical information symbolically, visually, numerically, or verbally as appropriate; and
3. employ quantitative methods such as arithmetic, algebra, geometry, or statistics to solve problems.

Biology Major Learning Outcomes

This course also helps you to work on these learning outcomes of the BIOLOGY MAJOR:

1. 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.
    - *BIOL 250 emphasizes practice in applying knowledge to new situations and evaluating the quantitative evidence for biological hypotheses.*

2. 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.
    - *BIOL 250 provides an opportunity for you to expand your quantitative skills in a way that is transferrable across disciplines and careers.*

What do you need for this class?

I have designed this course to be as affordable as possible. Required materials for the class have no cost for Geneseo students.

Required materials

1. Daily access to our course **Brightspace** site. Use our Brightspace site as the starting point for everything you need to do in the course. It will also be the primary mode of communication used by the instructional team to send you regular announcements and updates.
2. Reliable **Internet** access and a **laptop** that can run the software listed below
3. This **software** installed on your laptop
    a. R software (free download, https://cran.r-project.org/)
    b. RStudio (free download, https://posit.co/downloads/). RStudio requires a 64-bit operating system.
    c. Microsoft Excel (free to all Geneseo students, https://geneseo.atlassian.net/wiki/spaces/HELP/pages/76780164/Microsoft+Office+365
    d. Microsoft Teams (free to all Geneseo students, https://geneseo.atlassian.net/wiki/spaces/HELP/pages/76780293/Microsoft+Teams+at+Geneseo)
4. **Freely-available textbook:** *Introduction to Statistics for the Life and Biomedical Sciences*, 1st ed. by Julie Vu, Dave Harrington, and OpenIntro. Free PDFs of each chapter can be found on our Brightspace course page. A physical copy can be ordered online through Amazon or other retailers for about $25

Optional additional textbook (not required)

A Primer in Biological Data Analysis and Visualization Using R by Gregg Hartvigsen, any edition. You may have this already from another course, such as BIOL 116, 118, 120, or 203.

How will you know that you are learning?

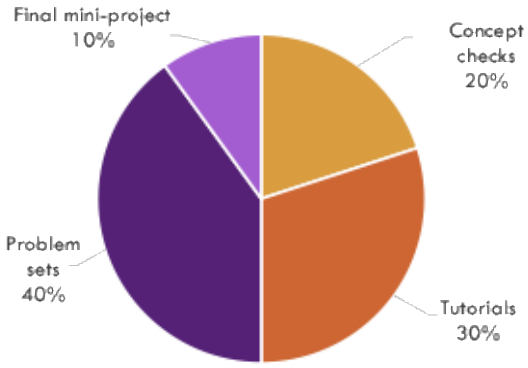
Learning to do statistics requires just that - *doing statistics*. To accomplish this, we will have a variety of activities and resources to support your progress in this class:

1. **Lectures** during class meetings will be used to present key concepts, theories, and methodologies.
2. **Interactive discussions** in class meetings are opportunities for you to clarify concepts and address questions.
3. You will have regular, **hands-on practice time** in class to use the R Programming Environment for data analysis, including **collaborative exercises** that ask you to apply statistical methods to real-world datasets.
4. **Assignments** are opportunities to reinforce and reflect on your understanding of course material.

Grading scheme

Item	Percent	Notes
Concept checks	20	2 per unit (8 total), in class and finished for homework
Tutorials	30	2 per unit (8 total), in class and finished for homework
Problem sets	40	1 per unit (4 total), in class and finished for homework
Final mini-project	10	Completed collaboratively during class at the end of the semester

The breakdown of your grade is shown in the graph on the right. The graph illustrates how your grade is earned through a variety of activities. Concept checks and tutorials together make up 50% of your grade. Your work in these components demonstrate your **engagement in the learning process**. Problem sets and the final mini-project are the other 50%, and show your **growth in what you have learned**. Altogether these activities are opportunities for you to learn, apply, and integrate new concepts and skills.



Components of your grade

The list below describes the components of your grade with a bit more detail. All assignments will be distributed and submitted in Brightspace.

1. **Concept checks.** These individually completed assignments help you to evaluate your understanding of concepts, separately from the coding tasks in the R Programming Environment. For each concept check, there are unlimited tries and only the final submission is graded. Once you are confident in your understanding, you can then move on to the code tutorials.

2. **Tutorials.** These individually completed assignments have two parts and two deadlines. In the first part of each tutorial, you'll learn how to use R to analyze data. Immediately after the first part's deadline, you will gain access to the answer key. For the second part of the assignment, you will compare your work to the answer key. Then, you'll analyze your strengths and areas of growth, as well as plan specific actions to address any gaps prior to starting on the problem set. As there are no wrong answers, this second part is graded on thoroughness and thoughtfulness.
3. **Problem sets.** These individually completed assignments culminate each unit. You'll apply what you've learned about statistical concepts and using R to execute statistical procedures. Each problem set is cumulative, i.e., expect to hang on to what you are learning throughout the semester.
4. **Final mini-project.** This mini-project is a celebration of the strengths of our coding support teams. Toward the end of the semester, we'll select real-world datasets to analyze, interpret, and share in lightning talks. To prepare us for this project, we'll engage with ungraded collaborative exercises to practice applying statistical methods to real-world datasets throughout the semester. Working collaboratively has huge advantages, as each team member's unique perspective, experience and skill set contribute to a more robust and higher quality product than when working alone. Likewise, the learning that occurs during the collaborative process is more effective and enduring, because of the dialogue between team members. Our collaborative exercises will always occur during class time, recognizing that it is difficult to coordinate busy schedules.

This class follows the Biology Department practice of a limited timeframe for regrading of assignments, in the case of grading errors, discrepancies, or other similar issues. Please submit your request for regrading of an assignment in writing (by email) within two weeks of receiving the grade. In this request, please include enough information for me to identify which item you'd like me to re-examine and your reason for this examination. You can use this link in Brightspace to email me with this request.

Final course grades will be assigned as shown below:

A range	B range	C range	D and below
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, the peer mentors, and the professor have communal responsibilities to our community, to promote learning, maintain a respectful environment, and prioritize our health and wellbeing. In our classroom, we are preparing you for not only other courses in the biology program, but also for your professional career.

Our responsibilities to promote learning

- **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.
- **Class attendance.** If there is an emergency or you are ill and risk infecting others, it is reasonable for you to miss a class. However, educational researchers conclude that class attendance is highly tied to success in a course. These findings are supported by new research on companies with employees that work from home vs. in person: collaborating with co-workers results in much more effective learning than working alone. As mentioned above, class meeting times will be used for interactive lectures and to get live help while completing assignments. If you need to miss a class meeting (e.g., illness-related reasons), 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 class meeting because of an emergency, I will use Brightspace to inform you as soon as I can.
- **Refusing to use AI unless permitted.** For this class, I ask you to prioritize the development of your statistics knowledge and skills, and refuse to use generative AI on any work that you are submitting for a grade. Artificial intelligence (AI) continues to be an evolving technology that shows promise as a valuable tool for knowledgeable users. However, the research on over-reliance on AI (specifically large language models like ChatGPT and Copilot) during the learning process continues to grow, with evidence that benefits like offloading cognitive processes may be harmful to our abilities to think independently, stifles creativity, and restricts expression of our own unique ideas and perspectives (see Zhai et al. 2024 for a recent review). Furthermore, even for knowledgeable users, relying on generative AI is less efficient (i.e., is more time-consuming) because of the necessary fact-checking and troubleshooting steps (Becker et al. 2025). The neurobiology of learning tells us that the process of learning something new should have a certain level of difficulty to be effectively learned. However, recognizing that it can also be frustrating to do something difficult, I have designed this course with many options for managing potential challenges, such as unlimited attempts on concept checks and abundant time in class to work on assignments. In some cases, we may be allowed to use generative AI during class when working with peer mentors or me – always ask first – and then attribute the tool used in the assignment submitted.
- **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. We encourage you to start assignments as early as possible and develop a regular schedule for your work in this class. Please check Brightspace frequently for updates on what you need to be ready for each class or any changes in assignment deadlines. I will also use Brightspace to send you weekly announcements to remind you of the tasks to be completed each week.

- **Timeliness and deadlines.** Arriving to class on time and completing our work in a timely fashion are critical. Posted deadlines and your own personal deadlines keep the work in this class manageable. Please be considerate to yourself 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 discuss what is possible for your situation. Please use this Google Form to discuss extending a deadline: https://forms.gle/U6yfYDFbYqdF69uWA.

Our responsibilities to maintain a respectful environment

- **Commitment.** Everyone will dedicate ourselves to doing our best work within the circumstances that we're experiencing. At any time, there can be stressful 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 sessions, or time we have scheduled to work with others outside of class.
- **Communication.** Everyone is expected to check their email at least twice a day on weekdays, and use email, Brightspace, or other agreed upon methods to communicate with fellow students. Please make sure to set Brightspace notifications to send you emails with updates. Please also note that the instructional team follows the Biology Department practice of replying to your emails within one or two business days after you send the message. We'll typically respond to emails received after 5:00 PM during the next business day. If you do not hear from us within this time frame, please feel free to send us a reminder email.
- **Uphold the student code of conduct.** The Geneseo code of conduct asks all students to commit to behaviors so that all members of our community can fulfill the values of the college: Learning, Creativity, Belonging, Civic Engagement, and Sustainability. Academic dishonesty and behavior that physically or psychologically harms others will be reported to the corresponding authorities. Academic dishonesty includes providing false information (lying, making up data), cheating (seeking, receiving and/or offering unpermitted help) and plagiarism (representing work as your own when it was created by others, including AI such as ChatGPT when not permitted). In addition, 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. I would rather work with you to solve problems before they become issues of misconduct, so please come talk to me early and often. For full details of the Student Code of Conduct, please see the Student Handbook.
- **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.

Our responsibilities to prioritize health and well-being

Please consider our communal responsibilities of prioritizing health and wellbeing, especially with extending grace to yourself and others, and being thoughtful about your own health and that of others. I have designed this course keeping in mind that illness and other unexpected disruptions can occur despite our goals to stay healthy and well. While this is an in-person class, the pace of the course has a bit of flexibility in the case of short absences.

If you are not feeling well, please stay home to recover and prevent transmitting an illness to others in the community. Everyone should also feel free to wear a face mask in crowded conditions where the risk of any infectious illness is high, such as classrooms, lecture halls, laboratory rooms, and residence halls. If you choose to wear a mask to protect yourself and others, remember that the mask needs to fit securely, covering your nose and mouth.

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. Please remember that it's never too early or too late to ask for help. The Dean of Students (585-245-5706, Dean's website) can also assist and provide direction to appropriate campus resources.

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 support services, accessibility, mental health, diversity and inclusion policies, and much more. Links are available on Brightspace.

Getting help with technology

We will be using computers in our class all the time. For everyday troubleshooting in the apps used the class, we have the instructor, peer mentor, and each other. For other assistance, CIT also provides a range of technology support resources, 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.

Library Research

Our library has an award-winning staff trained in finding the best information using library resources and advanced search strategies. Students may ask questions about using library services, locating materials, or conducting research projects. There is a librarian who specializes in the subject matter

for each major. The librarian for the Biology Department is Sherry Larson-Rhodes; however, you are welcome to work with any of our knowledgeable librarians. Librarians meet with students through a variety of ways, including chat, email, and in-person and virtual one-on-one research consultations. Email libraryhelp@geneseo.edu or visit their online help desk.

Accessibility

All course materials are available on Brightspace 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 do my best to address the situation.

SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. If you are experiencing any kind of barrier to learning opportunities, please know that there is support for you. The Office of Accessibility will coordinate reasonable accommodations, auxiliary aids, and/or services designed to ensure full participation and equal access to all academic programs, activities, and services at SUNY Geneseo. Students with approved accommodations may submit a semester request to renew their academic accommodations. More information on the process for requesting academic accommodations is on the OAS website. 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:*** Once your accommodations request has been approved or renewed (at the beginning of the semester or as soon as they have been established), please make an appointment with me (Dr. Yang) 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. The Dean of Students (deanstu@geneseo.edu), 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. **If you or a friend are feeling suicidal, are in mental health crisis, or need someone to talk to, call or text 988** for 24/7, confidential support to people in mental-health related distress.

Food Security for SUNY Geneseo Students

There are resources available for students who are food insecure. If you're unfamiliar with the phrase "food insecurity," you can learn more at the following link on Feeding America's website: Understanding Food Insecurity.

The Knight's Harvest Pantry at Geneseo, our on campus food pantry, works in partnership with the Geneseo-Groveland Emergency Food Pantry (GGEFP) and is facilitated by interns and volunteers working out of the Office of Student Volunteerism and Community Engagement as well as the School of Business, and the GOLD Leadership and Student Athlete Mentors programs.

Any student who is food insecure can submit a request here: Food Pantry Request Form to receive a bag of food that will provide them with items that will last a few days, including nonperishables and when available fresh fruits, vegetables, meat, and dairy. Once submitted, interns will connect directly with the student to communicate next steps and the time of your pick up. Pickups will take place in the MacVittie College Union, Room 114 - the GOLD Leadership Center.

This program will provide individuals with a bag of food up to once a month. We will do our utmost to ensure anonymity, while also working to destigmatize food insecurity in our community.

Students are also able to access the Geneseo-Groveland Emergency Food Pantry on their own if that is their preference. It is located at 31 Center St. and is open Tuesdays and Thursdays 10 AM - 2 PM and Wednesdays 4 - 6:30 PM.

If you have any questions about this process or anything relating to food insecurity, or have a need beyond what is outlined above, please refer to our website or contact us directly at foodpantry@geneseo.edu / 585-245-5893 or the Dean of Students at 585-245-5706.

Emergency Funding

The college has three sources of emergency funding for students experiencing short-term financial crises. The Camiolo Student Emergency Loan Fund (SELF) provides short-term loans to students for situations both temporary and beyond their control. The SELF was established with the expectation that students who use the fund seek to "pay it forward" as soon as they are able by contributing to

the fund so other students can be helped, too. While there is not a legal obligation, the donors hope that student loan recipients respect and honor the value of community and helping others in their time of crisis. The One Knight Student Aid Emergency Fund assists Geneseo students who are facing financial emergencies mainly related to the COVID-19 pandemic. The fund offers grants (one-time award) depending on a student's documented financial need. For those students expecting a refund from financial aid, a Temple Hill loan of up to $500 can be offered prior to the approved loan dispersal. If you are experiencing financial hardship, please contact the Dean of Students (585-245-5706), who can assist and provide direction to appropriate campus resources.

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 calendar of major religious observances.

Military Obligations and Class Attendance

Federal and New York State law requires institutions of higher education to provide an excused leave of absence from classes without penalty to students enrolled in the National Guard or armed forces reserves who are called to active duty. If you are called to active military duty and need to miss classes, please let me know and consult as soon as possible with the Dean of Students.

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. For ideas, questions, or concerns related to diversity, equity, and inclusion in the Biology Department, please reach out to bio-diversity@geneseo.edu.

Schedule

Below is we are aiming for! Assignments will be described in detail on Brightspace. I may adjust the topics and dates during the semester if it looks like we'll need more time on specific things. Be assured I will inform you of any changes in a timely fashion!

Unit 1: Introduction to data, probability, and distributions

AUGUST 25-29

Date	Day	Agenda	What's due
8/25	Mon		
8/26	Tues	Types of data in biological research	
8/27	Wed		
8/28	Thurs	Descriptive statistics	
8/29	Fri		Survey for coding support group assignments

SEPTEMBER 1-5

Date	Day	Agenda	What's due?
9/1	Mon		
9/2	Tues	Intro to R; Probability and distributions	
9/3	Wed		
9/4	Thurs	Probability and distributions	Concept check (#1) and tutorial (#1, part 1)
9/5	Fri		

SEPTEMBER 8-12

Date	Day	Agenda	What's due?
9/8	Mon		Tutorial (#1, part 2)
9/9	Tues	Hypothesis testing	
9/10	Wed		
9/11	Thurs	Hypothesis testing	Concept check (#2) and tutorial (#2, part 1)
9/12	Fri		

SEPTEMBER 15-19

Date	Day	Agenda	What's due?
9/15	Mon		Tutorial (#2, part 2)
9/16	Tues	Work on problem set	
9/17	Wed		
9/18	Thurs	Work on problem set	
9/19	Fri		

Unit 2: Proportions and frequencies

SEPTEMBER 22-26

Date	Day	Agenda	What's due?
9/22	Mon		Problem set (#1)
9/23	Tues	Goodness of fit	
9/24	Wed		
9/25	Thurs	Goodness of fit	Concept check (#3) and tutorial (#3, part 1)
9/26	Fri		

SEPTEMBER 29-OCTOBER 3

Date	Day	Agenda	What's due?
9/29	Mon		Tutorial (#3, part 2)
9/30	Tues	Tests of independence	
10/1	Wed		
10/2	Thurs	Tests of independence	Concept check (#4) and tutorial (#4, part 1)
10/3	Fri		

OCTOBER 6-10

Date	Day	Agenda	What's due?
10/6	Mon		Tutorial (#4, part 2)
10/7	Tues	Work on problem set	
10/8	Wed		
10/9	Thurs	Work on problem set	Suggested early deadline for Problem Set #2 (before leaving for Fall Break)
10/10	Fri		

Unit 3: Comparing groups

OCTOBER 13-17

Date	Day	Agenda	What's due?
10/13	Mon		Problem set (#2)
10/14	Tues	Fall Break, no class	
10/15	Wed		
10/16	Thurs	One- and two-sample tests	
10/17	Fri		

OCTOBER 20-24

Date	Day	Agenda	What's due?
10/20	Mon		
10/21	Tues	One- and two-sample tests	
10/22	Wed		
10/23	Thurs	Comparing two or more samples	Concept check (#5) and tutorial (#5, part 1)
10/24	Fri		

OCTOBER 27-31

Date	Day	Agenda	What's due?
10/27	Mon		Tutorial (#5, part 2)
10/28	Tues	Comparing two or more samples	
10/29	Wed		
10/30*	Thurs	Comparing two or more samples	Concept check (#6) and tutorial (#6, part 1)
10/31*	Fri		

*Dr. Yang is out of town; attend class as usual to work on assignments with peer mentors and coding support group

NOVEMBER 3-7

Date	Day	Agenda	What's due?
11/3	Mon		Tutorial (#6, part 2)
11/4	Tues	Work on problem set	
11/5	Wed		
11/6	Thurs	Work on problem set	
11/7	Fri		

Unit 4: Correlation and regression

NOVEMBER 10-14

Date	Day	Agenda	What's due?
11/10	Mon		Problem set (#3)
11/11	Tues	Correlation	
11/12	Wed		
11/13	Thurs	Correlation	Concept check (#7) and tutorial (#7, part 1)
11/14	Fri		

NOVEMBER 17-21

Date	Day	Agenda	What's due?
11/17	Mon		Tutorial (#7, part 2)
11/18	Tues	Regression	
11/19	Wed		
11/20	Thurs	Regression	Concept check (#8) and tutorial (#8, part 1)
11/21	Fri		

NOVEMBER 24-28

Date	Day	Agenda	What's due?
11/24	Mon		Tutorial (#8, part 2)
11/25	Tues	Work on problem set	
11/26	Wed		
11/27	Thurs	Thanksgiving Break, no class	
11/28	Fri		

DECEMBER 1-5

Date	Day	Agenda	What's due?
12/1	Mon		
12/2	Tues	Work on problem set	
12/3	Wed		
12/4	Thurs	Work on problem set, start mini-projects	
12/5	Fri		

DECEMBER 8-12

Date	Day	Agenda	What's due?
12/8	Mon		Problem set (#4)
12/9	Tues	Study day; no class	
12/10	Wed	Mini-projects (Section 2)	3:30-6:00 PM Analysis and presentation slides (Section 2)
12/11	Thurs		
12/12	Fri		

DECEMBER 15-16

Date	Day	Agenda	What's due?
12/15	Mon	Mini-projects (Section 1)	12:00-2:30 PM Analysis and presentation slides (Section 1)
12/16	Tues		