



PUBHBIO 2210 – Biostatistics for Public Health Research
3 credit hours – Autumn, 2025
Hybrid Session

Lab/Activity Time: Wednesdays (9:10am–10:05am EST), Cunz Hall – Room 230

Course Instructor: James B. Odei, PhD.
(Mathematical Science–Statistics, Utah State University, Logan-Utah, 2014)
Office: 248 Cunz Hall
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Instructor's Office Hours: *Mondays 1:00pm–2:00pm EST, Wednesdays 11:00am–12:00pm EST* and by appointment, in *Cunz Hall – Room 248 or via (OSU Carmen) Zoom*

Office hours will be led by the instructor once weekly. During this session, students will have the space to ask questions about course content, assignments, the previous week's muddy points, or anything else that may be unclear from lectures or lab. These sessions are designed to enhance learning and provide additional context to support the student's ability to apply the information to current issues/topics.

Zoom Link (**Mondays**):

<https://osu.zoom.us/j/92120670573?pwd=trU8j15eOLtmufCKZtLajlVwpm5Ya.1>

Meeting ID: 921 2067 0573 **Password:** 245798

Zoom Link (**Wednesdays**):

<https://osu.zoom.us/j/93686749140?pwd=WKbdFDdRiX2xZ2ttNghduSVz06II8n.1>

Meeting ID: 936 8674 9140 **Password:** 596303

Faculty Feedback & Response Time: The following give you an idea of my intended availability during the course: (Remember that you can also call **614-688-HELP** at any time if you have a technical problem.)

- **Grading and feedback:** For large weekly assignments, you can generally expect feedback within **7 days**.
- **Email:** I will reply to emails (sent via carmen) within **24 hours on days when class is in session at the university**.
- **Discussion board:** I will check and reply to messages in the discussion boards every **24 hours on school days**

Graduate Teaching Assistant (GTA): Christilene Tumsiah
Email: tumsiah.1@buckeyemail.osu.edu

Office Hours:

Fridays 11:30am–12:30pm EST via (OSU Carmen) Zoom.

Zoom Link:

<https://osu.zoom.us/j/98490652198?pwd=Rm6MRbMAhD1EA3no1sUIY4cHEK1IXx.1>

Meeting ID: 984 9065 2198

Password: 142099

GTA**Responsibilities:**

The TA assigned to the course will assist with the online activities, hold regular office hours, and lead review sessions for any students who need help with class material. The TA may assist with scoring assignments and exams; however, final grades will be assigned by the professor. **Any questions regarding grading must be directed to the professor and not the TA.**

Course Description:

Hands-on experience using statistical tools to answer real-world questions. Students will design and implement a short survey and analyze their results. Emphasis is on analysis of actual survey data using statistical software. Statistical topics include numerical/graphical summaries, measures of association, and hypothesis testing. Focus is on interpretation, not calculation.

Pre-requisites:

None

GE Information:

This course satisfies GE requirement for the Foundations: Mathematical and Quantitative Reasoning (or Data Analysis) category. The goals and the university's stated expected learning outcomes for this requirement are as follows.

GE Goals:

Successful students will be able to apply quantitative or logical reasoning and/or mathematical or statistical analysis methodologies to understand and solve problems, and to communicate results.

GE Expected Learning Outcome (ELO):

- *ELO 1.1* Successful students are able to use logical, mathematical and/or statistical concepts and methods to represent real-world situations.
- *ELO 1.2* Successful students are able to use diverse logical, mathematical and/or statistical approaches, technologies, and tools to communicate data symbolically, visually, numerically, and verbally.
- *ELO 1.3* Successful students are able to draw appropriate inferences from data based on quantitative analysis and/or logical reasoning.
- *ELO 1.4* Successful students are able to make and evaluate important assumptions in estimation, modeling, logical argumentation, and/or data analysis.
- *ELO 1.5* Successful students are able to evaluate social and ethical implications in mathematical and quantitative reasoning.

Course Learning Objectives (CLO):

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

- *CLO-1* Translate a general idea into a specific research question (ELO 1.5)
- *CLO-2* Construct a survey to collect data specific to a research question (ELO 1.5)
- *CLO-3* Choose and calculate/create the appropriate numerical and graphical summary measures for different data types (ELO 1.1-1.2)
- *CLO-4* Construct confidence intervals for means and proportions (ELO 1.1, 1.3)

- *CLO-5* Choose and perform the appropriate hypothesis test for different data types and interpret the results (ELO 1.1, 1.3-1.4)
- *CLO-6* Summarize statistical results through written, visual, and oral communication methods so that results are understandable to someone who has not taken this course (ELO 1.2, 1.5)

Foundational Competencies:

- Apply the fundamental principles of the five core disciplines of public health (biostatistics; environmental health; epidemiology; health administration/policy; health behavior/promotion) to domestic and international population health issues. (5)
- Communicate public health information, in both oral and written forms, through a variety of media and to diverse audiences. (6)
- Locate, use, evaluate and synthesize public health information. (7)

A complete list of College of Public Health Competencies is located on the College of Public Health website: <https://cph.osu.edu/students/competencies>.

CEPH Domains:

- **Role and Importance of Data in Public Health:** Address the basic concepts, methods, and tools of public health data collection, use, and analysis and why evidence-based approaches are an essential part of public health practice. (2)
- **Health Communications:** Address the basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology (9)

CEPH Cross-Cutting Concepts:

- Independent work and a personal work ethic (6)
- Research methods (10)
- Teamwork and leadership (12)

Text/Readings:

Intuitive Biostatistics, 4th Edition, by Harvey Motulsky (2017)

Note: 3rd edition (2014) may also be used

The text is intended as a **supplement** to course materials available on Carmen. No assignments or assessments require this text.

In addition to assigned textbook readings, students will occasionally be expected to read articles from peer-reviewed literature as well as other resources. These readings will be made available through Carmen.

Carmen Access:

There is a Carmen site for this course: <https://carmen.osu.edu>. All course materials are available via Carmen.

Login at <http://carmen.osu.edu> with your OSU internet username (**name.#**) and password then go to PUBHBIO 2210. The site will contain the syllabus, recorded lectures, quizzes, assignments, and additional readings. All assignments **must** be turned in electronically via the Carmen dropbox, unless otherwise directed.

You will need to use [BuckeyePass \(buckeyepass.osu.edu\)](https://buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](https://go.osu.edu/add-device) help article for step-by-step instructions (go.osu.edu/add-device).
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click “**Enter a Passcode**” and then click the “**Text me new codes**” button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the [Duo Mobile application \(go.osu.edu/install-duo\)](https://go.osu.edu/install-duo) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357 (HELP) and the IT support staff will work out a solution with you.

Carmen Zoom: Any online office hours and/or online review sessions will be held via **OSU Carmen Zoom**. Information about using Carmen Zoom as a participant can be found at: <https://teaching.resources.osu.edu/toolsets/carmenzoom>. The links for participating can be found on page 1 of this syllabus or by clicking on the Zoom tab in the Carmen course website to join a specific meeting.

This is a **hybrid course**. There are some required sessions when you must be logged in to Carmen at a scheduled time. Generally, the Monday and Wednesday in-class sessions will consist of problem solving, class activities, group discussion (“digging deeper”), and computer lab exercises. The Friday class will be completed via distance learning, except for the last Friday of the semester (4/19) which will be part of a week-long poster session. Students will be responsible for reading the assigned textbook chapter(s), watching the recorded lecture, reviewing the lecture notes, and completing the online quiz before the following Monday. Lectures and quizzes will be posted in advance on Thursday. Students must complete each quiz by midnight Sunday (see schedule for exact dates).

Course Format: How this course works

- **Mode of Delivery:** This is a *hybrid* course. There are some required sessions when you must be logged in to Carmen at a scheduled time for an *online delivery via asynchronous Distance Learning (DL)* mode. Generally, there is **an assigned day** (see “Lab/Activity Time” on page 1 of syllabus) in the week for an in-class session which consist of problem solving, class activities, group discussion, or computer lab exercises.
- **Pace of Online Activities:** The course material is organized in **weekly modules**. Each module generally starts at 12:00 am EST on a Friday

preceding the corresponding week and ends at 11:59 pm EST on a Thursday (see calendar for specific dates). Each module mostly contains (a) recorded lectures to be watched asynchronously, (b) computer labs, (c) online quizzes, (d) textbook readings, (e) homework, (f) surveys, (g) activities. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame. All asynchronous activities will be accessible via Carmen. Periodically during the semester, I may ask you for feedback on your learning experience to improve the course. Students will be responsible for reading the assigned textbook chapter(s), watching the recorded lecture, reviewing the lecture notes, and completing the online quiz by the due date (Monday nights). Majority of the remaining assignments are due Friday nights. Lectures and quizzes will be posted in advance. Students must complete each quiz by midnight on the due date (see schedule for exact dates).

- **Credit Hours and Work Expectations:** This is a **3-credit-hour course**. According to [Ohio State policy \(go.osu.edu/credithours\)](http://go.osu.edu/credithours), students should expect around 3 hours per week of time spent on direct instruction (e.g., instructor content and Carmen activities) in addition to 6 hours of homework or learning activities (e.g., reading and assignment preparation) to receive a grade of (C) average. ***To earn a grade higher than C, students should expect to put in additional time and effort.***
- **Attendance and Participation Requirements:** Because this is an online course, your attendance is based on your online activity and participation. The following is a summary of students' expected participation:
 - (i) **Participating in online activities for attendance: AT LEAST ONCE PER WEEK** You are expected to log in to the course in Carmen every week. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.
 - (ii) **Office hours and live sessions: OPTIONAL** All live, scheduled events for the course, including my office hours, are optional.
 - (iii) **Participation in discussion forums: UP TO 2 TIMES PER WEEK** As part of your participation, each week you can expect to post (up to twice) as part of our substantive class discussion on the week's topics or activities.

Course Technology: (1) *Technology skills needed for this course*

- Basic computer and web-browsing skills
- Navigating Carmen (go.osu.edu/canvasstudent): for questions about specific functionality, see the [Canvas Student Guide](#).
- CarmenZoom virtual meetings (go.osu.edu/zoom-meetings)
- Recording a slide presentation with audio narration (go.osu.edu/video-assignment-guide)
- Recording, editing, and uploading video (go.osu.edu/video-assignment-guide)

(2) *Required Equipment*

- **Computer:** current Mac (OS X) or PC (Windows 10+) with high-speed internet connection
- **Calculator:** Students should have access to a scientific calculator that can perform basic arithmetic, square roots, logarithms, and exponentiation. For this online class, a program such as Microsoft Excel may suffice.
- **Other:** a mobile device (smartphone or tablet) or landline to use for BuckeyePass authentication

Optional equipment (for participation in optional live office hours and/or review sessions)

- **Webcam:** built-in or external webcam, fully installed and tested
- **Microphone:** built-in laptop or tablet mic or external microphone

(3) *Required Software*

- **Microsoft Office 365:** All Ohio State students are now eligible for free Microsoft Office 365. Full instructions for downloading and installation can be found at go.osu.edu/office365help.
- **R (for statistics):** This course will use the software program R (<https://www.r-project.org/>). This software is provided for this course through a remote server so that students can access it anywhere they have an internet connection by going to: <https://remotelab.osu.edu/#/> and logging in with their **name.#**. Note that the login procedure requires BuckeyePass, also referred to as Duo or 2-factor authentication <https://admin.resources.osu.edu/buckeyepass/guide-to-two-factor-authentication-by-duo-mobile> (<https://guide.duo.com>) – the same procedure as is required to access Carmen. For the purpose of illustration and to get the best computing support, students are **required to use R for all assignments and activities**.
- **Qualtrics (for survey):** You will be using Qualtrics (<http://osu.qualtrics.com/>) an online survey software tool, to create and implement a survey. Instructions for creating an account and using the software will be provided.

(4) *Technology Support*

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** go.osu.edu/IT
- **Phone:** 614-688-HELP (4357)
- **Email:** servicedesk@osu.edu
- **TDD:** 614-688-8743

Assignments/ Assessments:

All deadlines are by 11:59 pm EST and submission is through Carmen. Students are strongly encouraged to submit well in advance of deadlines to avoid difficulties, technical or otherwise. Quizzes, labs, and activities not submitted on time will receive no credit. Survey project assignments submitted up to 72 hours late will have the earned score scaled by 50%. For example, an assignment due Friday but submitted the following Monday scoring 9/10 submitted will receive a score of $(9/10) \times (50\%) = 4.5/10$.

Exams: 15% each (30% total)

There will be two midterm exams. Both exams will be online and timed; have a similar structure (multiple choice and short answer response) and involve data analysis and interpretation using the computer. The exams will be on **Wednesday, October 1, 2025, and Wednesday, November 5, 2025**. If you cannot make it for an exam due to a scheduling conflict, you must make arrangements with the instructor **at least one month prior to the scheduled exam**. Students who miss an exam **will not be allowed** to take a make-up exam and in the absence of a documented excuse will receive a 0 on the exam.

Quizzes: 10%

Upon completion of each distance lecture, students will need to take a short quiz on Carmen. The quiz will be active up until **11:59 pm EST** the day it is due (see schedule for exact dates). A score of at least 80% on a quiz receives full credit for that quiz at the end of the semester before final course grades are computed. If a student scores below an 80% on a quiz, he/she will receive 0 points for that quiz but will have the opportunity to “make up” the quiz (i.e., to avoid the 0 points). Otherwise, 0 points will be awarded for that quiz at the end of the semester before final course grades are computed. If a quiz is not completed before the deadline, 0 points will be given for that quiz (**note: no quiz make-up is allowed in this case**). **Detailed instruction for the quiz make-up is available under Module 0 (and in the quiz-make up dropbox) in CARMEN**. The instructor reserves the right to penalize students who abuse this quiz make-up policy. **Quizzes must be completed without the help of other individuals (books and notes are okay)**.

Lab Exercises: 10%

Approximately one assignment per week will consist of a computer lab session with lab exercises provided before/on the day of the lab (usually by Wednesday) using the R statistical software package. Exercises, which are designed to be completed during the allotted time, should be completed during the week, and must be turned in electronically via Carmen by the due day (usually Friday). Students may work together but **must** submit their own work in their own writing. No late lab assignments will be accepted.

Activities: 10%

Some activities require interaction with other students, usually through discussion board posts. For such activities, students may work together but must submit their own work in their own writing. Other activities require completing and submitting your work in an assigned group.

Survey Project:

Students will design and implement a short survey as an ongoing project throughout the course, culminating in a final video presentation and final written report (details below). Students will work **in groups assigned by the instructor** to design and implement the survey and to create a video presentation, however, each student will write his/her own final report/paper.

- **Survey Project–Homework: 10%**

There will be 7 homework assignments related to the survey assignment that students will be working on throughout the course. Most of these homework assignments will be completed and submitted (**electronically** through the Carmen dropbox) in the assigned groups.

- **Survey Project–Video Presentation: 15%**

Students will work in the assigned groups to create a video presentation. The video presentations are due on **Tuesday, 12/2 by 11:59 pm EST**. In addition, there will be peer feedback/evaluation on these video presentations between **Wednesday, 12/3** and **Friday, 12/5**. Note here that the last day to provide student video feedback is on **Friday, 12/5 by 11:59 pm EST**. Grades for the video presentation will be determined by (a) the assigned group video presentation, and (b) student’s peer feedback of the video presentation. Specific instructions for the video presentation will be provided in Carmen.

- **Survey Project–Final Report/Paper: 15%**

The final assignment for this course will be a written report/paper, due on **Monday, 12/15 by 11:59 pm EST**. While students will be working **in groups** to design and implement the survey, each student will write **their own final report or paper**. Specific instructions for the final report/paper will be provided in Carmen.

Grading:

Final class grade will be determined as follows:

2 Exams	15% each (30% total)
Quizzes	10%
Lab Exercises	10%
Activities	10%
Survey Project: Homework	10%
Survey Project: Video Presentation	15%
Survey Project: Final Report	15%

Any questions regarding grading should be addressed within one week of the return of the assignments or exams. **Any questions regarding grading must be directed to the professor and not the TA.**

Grading Scale: This course will use the following grading scheme*:

A	93 – 100	Outstanding work that reflects mastery of the material and the ability to apply it
A-	90 – <93	Excellent work that reflects mastery of the material
B+	87 – <90	Good work that reflects mastery of most of the material
B	83 – <87	Good work that reflects mastery of some of the material
B-	80 – <83	Good work that reflects mastery of a few aspects of the material
C+	77 – <80	Mediocre work that reflects familiarity with, but not mastery of the material
C	73 – <77	Mediocre work that reflects familiarity with most of the material
C-	70 – <73	Mediocre work that reflects little familiarity with the material
D+	67 – <70	
D	60 – <67	
E	Below 60	

**The instructors reserve the right to adjust the grading scale if it appears necessary due to overall class performance. These adjustments will only raise a student's grade, not lower it.*

A student will be given a grade of “Incomplete” only if they have completed most of the class work and are unable to complete the work for a serious reason beyond their control. Students are responsible for educating themselves about the registrar's deadlines for withdrawal from the course. Assistance can be obtained from the College of Public Health, Office of Academic Programs and Student Services.

Assignment Scoring:

Clear and effective communication is crucial in biostatistics. This rule is applied to all assignments (e.g., problem sets, exams, project). In any problem-solving question, it is the student's responsibility to make sure that he/she justifies his/her answer and provides enough detail for the grader to understand. Points may be deducted for answers that are not well-justified, even if they are correct.

Any questions regarding grading must be addressed **within one week** of the return of the assignment or exam. No request of regrading on previous assignments/exams will be accepted after the final group project is submitted. As a general policy, when requested, the regrading will apply to the whole exam or the homework, not just to the specific part which the student thinks there might be a mistake. Consequently, regrading may lead to a lower overall score. **Any questions regarding grading must be directed to the professors.**

Class Policies:

All quizzes and assignments are due by the required dates listed in Carmen Canvas. Policies for this online course include the following:

- **Course materials:** Students are absolutely prohibited from uploading course materials to Quizlet, Chegg, or similar websites under both copywrite regulations and as part of the academic integrity agreement.
- **Quizzes and exams:** You must complete the midterm and/or final exams yourself, without any external help or communication. Weekly quizzes are included as self-checks with points attached.
- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow **MLA** or **APA** style to cite the ideas and words of your research

sources (including class articles and cases) you use for your written assignments and discussion points. You are encouraged to ask a trusted person to proofread your assignments before you turn them in – but no one else should revise or rewrite your work.

- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you have explored in previous courses, please discuss the situation with me.
- **Falsifying research or results:** All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.
- **Collaboration and informal peer-review:** The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you are unsure about a particular situation, please feel free just to ask ahead of time.
- **Group projects:** This course includes group projects, which can be stressful for students when it comes to dividing work, taking credit, and receiving grades and feedback. I have attempted to make the guidelines for group work as clear as possible for each activity and assignment, but please let me know if you have any questions.

Discussion and Communication Guidelines:

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let us maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm does not always come across online.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.)
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

Copyright Statement

This syllabus and all course materials (e.g., homework assignments, solution keys, course materials) are under copyright by the instructor and cannot be posted elsewhere without written permission. The materials used in connection with this course are subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course.

Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Generative AI Policy

There has been a significant increase in the popularity and availability of a variety of generative artificial intelligence (AI) tools, including ChatGPT, Sudowrite, and others. These tools will help shape the future of work, research, and technology – but when used in the wrong way, they can stand in conflict with academic integrity at Ohio State. **To maintain a culture of integrity and respect, the generative AI tools should not be used in the completion of course assignments** unless an instructor specifically authorizes their use. Any use of GenAI tools for work in this class may therefore be considered a violation of Ohio State’s [Academic Integrity](#) policy and [Code of Student Conduct](#) because the work is not your own. The use of unauthorized GenAI tools will result in referral to the [Committee on Academic Misconduct](#). If we suspect that you have used GenAI on an assignment for this course, we will ask you to communicate with us to explain your process for completing the assignment in question. If you feel you need to use GenAI for translation, please contact the instructors first. If you have any other questions regarding this course policy, please contact us.

Office of Student Life: Disability Services

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are ill and need to miss class, including if you are staying home and away from others while experiencing symptoms of a viral infection or fever, please let me know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services (in room 098 Baker Hall, 113 W. 12th Avenue) to request reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu.

Mental Health Services

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student’s ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life’s Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling [614-292-5766](tel:614-292-5766). CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at [614-292-5766](tel:614-292-5766) and 24-hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline (or through the 24/7 National Suicide Prevention Hotline at 1-800-273-TALK or at <https://suicidepreventionlifeline.org>)

Religious Beliefs or Practices Accommodations

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated

its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to report discrimination or harassment based on religion, individuals should contact the [Civil Rights Compliance Office](#). (Policy: [Religious Holidays, Holy Days and Observances](#))

Academic Integrity

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University, the College of Public Health, and the Committee on Academic Misconduct (COAM) expect that all students have read and understood the University's *Code of Student Conduct* and the School's *Student Handbook*, and that all students will complete all academic and scholarly assignments with fairness and honesty. The *Code of Student Conduct* and other information on academic integrity and academic misconduct can be found at the COAM web pages (<https://oaa.osu.edu/academic-integrity-and-misconduct>). Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct*, the *Student Handbook*, and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Please note that the use of material from the Internet without appropriate acknowledgement and complete citation is plagiarism just as it would be if the source were printed material. Further examples are found in the *Student Handbook*. Ignorance of the

Code of Student Conduct and the *Student Handbook* is never considered an “excuse” for academic misconduct.

If I suspect a student of academic misconduct in this course, I am obligated by University Rules to report these suspicions to the University’s Committee on Academic Misconduct. If COAM determines that the student has violated the University’s *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in the course and suspension or dismissal from the University. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages ([COAM Home](#))
- *Ten Suggestions for Preserving Academic Integrity* ([Ten Suggestions](#))
- *Eight Cardinal Rules of Academic Integrity* ([Northwestern-8CardinalRules](#))

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee ([Faculty Rule 3335-5-48.7 \(B\)](#)). For additional information, see the [Code of Student Conduct](#).

Intellectual Diversity

Ohio State is committed to fostering a culture of open inquiry and intellectual diversity within the classroom. This course will cover a range of information and may include discussions or debates about controversial issues, beliefs, or policies. Any such discussions and debates are intended to support understanding of the approved curriculum and relevant course objectives rather than promote any specific point of view. Students will be assessed on principles applicable to the field of study and the content covered in the course. Preparing students for citizenship includes helping them develop critical thinking skills that will allow them to reach their own conclusions regarding complex or controversial matters.

Grievances and Solving Problems

A student who encounters a problem related to his/her educational program has a variety of avenues available to seek resolution. According to University Policies, if you have a problem with this class, you should seek to resolve the grievance concerning a grade or academic practice by speaking first with the instructor or professor. Then, if necessary, you may take your case to the department chairperson. Specific procedures are outlined in [Faculty Rule 3335-8-23](#), the [CPH Graduate Student Handbook](#), and the [CPH Undergraduate Student Handbook](#). Grievances against graduate, research, and teaching assistants should be submitted first to the supervising instructor, then to the chairperson of the assistant's department.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status,

military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Civil Rights Compliance Office:

Online reporting form at <http://civilrights.osu.edu/>,
Call 614-247-5838 or TTY 614-688-8605,
Or Email civilrights@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Civil Rights Compliance Office to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Course Schedule

Week/Class	Date	Module/Topic	In-Person Meeting	Readings	Assignment (Due date)
1	Mon 8/25 – Thur 8/28	<i>Module 0.</i> Introduction	Intro. & Activity-0 (Qualtrics Access)	Ch 1-3	Watch lecture #0; Interests Questionnaire; Syllabus Quiz (by Thur 8/28); Activity #0 – Qualtrics Access (by Fri 8/29)
2	Fri 8/29 – Thur 9/4	<i>Module 1.</i> Types of data and software intro	Lab 1	Ch 8	Watch lecture #1; Quiz #1 (by Mon 9/1) Quiz #1-Make-up (due Wed 9/3) Activity #1 (due Fri 9/5); Lab #1 (due Fri 9/5); HW #1 (due Fri 9/5)
Mon 9/1		No Class: <i>Labor Day</i>			
3	Fri 9/5 – Thur 9/11	<i>Module 2.</i> Graphical & numeric data summaries	Lab 2	Ch 7, 9-11	Watch lecture #2; Quiz #2 (by Mon 9/8) Quiz #2-Make-up (due Wed 9/10) Activity #2 Part 1 (due Wed 9/10); Activity #2 Part 2 (due Fri 9/12); Lab #2 (due Fri 9/12); HW #2 (due Fri 9/12)
4	Fri 9/12 – Thur 9/18	<i>Module 3.</i> Confidence intervals & hypothesis tests	Lab 3	Ch 4, 15-17	Watch lecture #3; Quiz #3 (by Mon 9/15) Quiz #3-Make-up (due Wed 9/17) Activity #3 (due Fri 9/19) Lab #3 (due Fri 9/19)
5	Fri 9/19 – Thur 9/25	<i>Module 4.</i> Confidence intervals; means & proportions	Lab 4	Ch 4, 12-14	Watch lecture #4; Quiz #4 (by Mon 9/22) Quiz #4-Make-up (due Wed 9/24); Lab #4 (due Fri 9/26); HW #3 (due Fri 9/26) Activity #4 – <i>Exam 1 Review</i> (open)
6	Fri 9/26 – Thur 10/2	<i>Module 5.</i> Univariable hypothesis tests	Lab 5	Ch 18-19	Watch lecture #5; Quiz #5 (by Mon 9/29) Quiz #5-Make-up (due Thur 10/2) Activity #4 (due Mon 9/29) ; Lab #5 (due Fri 10/3); HW #4 (due Fri 10/3)
Wed 10/1		EXAM #1		Online timed exam	
7	Fri 10/3 – Thur 10/9	<i>Module 6.</i> Multivariable hypothesis tests: categ./categ.	Activity 5	Ch 27-28	Watch lecture #6; Quiz #6 (by Mon 10/6) Quiz #6-Make-up (due Wed 10/8) Activity #5 (due Fri 10/10); Lab #6 (due Fri 10/10); HW #5 (due Fri 10/10)
8	Fri 10/10 – Thur 10/16	<i>Module 7.</i> Multivariable hypothesis tests: cont./categ.	– – – –	Ch 30, 39	Watch lecture #7; Quiz #7 (by Mon 10/13) Quiz #7-Make-up (due Wed 10/15) Activity #6 (open) Lab #7 (due Fri 10/17)
Thur 10/16 – Fri 10/17		No Classes: <i>Autumn Break</i>			
9	Fri 10/17 – Thur 10/23	<i>Module 8.</i> Multiple comparisons	Activity 6	Ch 22-23, 40	Watch lecture #8; Quiz #8 (by Mon 10/20) Quiz #8-Make-up (due Wed 10/22) Activity #6 (due Fri 10/24); Lab #8 (due Fri 10/24)
10	Fri 10/24 – Thur 10/30	<i>Module 9.</i> Multivariable hypothesis tests: cont./cont.	Activity 7	Ch 32-33	Watch lecture #9; Quiz #9 (by Mon 10/27) Quiz #9-Make-up (due Wed 10/29) Activity #7 (due Fri 10/31); Lab #9 (due Fri 10/31); Activity #8 – <i>Exam 2 Review</i> (open)

11	Fri 10/31 – Thur 11/6	<i>Module 10.</i> Capstone example	— — — —	Ch 44-45	Watch lecture #10; Quiz #10 (by Mon 11/3); Quiz #8-Make-up (due Thur 11/6) Activity #8 (due Tues 11/4, 5:00pm EST); HW #6 (due Fri 11/7)
	Wed 11/5	EXAM #2		Online timed exam	
12	Fri 11/7 – Thur 11/13	<i>Module 11.</i> Power and sample size	Lab 10	Ch 20, 26	Watch lecture #11; Quiz #11 (by Mon 11/10); Quiz #11-Make-up (due Wed 11/12); Lab #10 (due Fri 11/14); HW #7 (due Fri 11/14)
13	Fri 11/14 – Thur 11/20	<i>Module 12.</i> Paired data	Activity 9	Ch 31	Watch lecture #12; Quiz #12 (by Mon 11/17); Quiz #11-Make-up (due Wed 11/19); Lab #11 (due Fri 11/21) Activity #9 – Journal Article (open)
14	Fri 11/21 – Tue 11/25				Activity #9 – Journal Article (due Mon 11/24)
	Wed 11/26 – Fri 11/28	No Classes: Thanksgiving Break & Columbus Day or Indigenous Peoples' Day			
15	Fri 11/28 – Tue 12/2	N. Video Presentations			Video Presentation (due Tue 12/2)
	Wed 12/3 – Fri 12/5				Peer Feedback on Assigned Video Presentations (due Fri 12/5)
16	Fri 12/5 – Mon 12/15	FINAL REPORT			Final Report (due Mon 12/15)* End-of-Semester Peer Evaluation of Members for Group Project (due Mon 12/15)

Readings are in the Intuitive Biostatistics textbook

**Deadline may be extended if specific circumstances warrant – must contact instructor in advance*

Alignment of Course Assessments with Degree Program Competencies, Course Objectives, CEPH Domains, and CEPH Cross-Cutting Concepts

Assessment	Course Objectives	Competencies	Domains	Cross-Cutting Concepts
Exams	3, 4, 5, 6	5, 7	2	10
Quizzes	3, 4, 5, 6	5, 7	2	10
Lab Exercises	4, 5, 6	5, 6, 7	2, 9	10
Activities	2, 3, 5, 6	5, 6, 7	2, 9	10
Survey Project: Homework	1, 2, 4, 5, 6, 7	5, 6, 7	2, 9	6, 10, 12
Survey Project: Video Presentation	1, 2, 4, 5, 6, 7	5, 6, 7	2, 9	10, 12
Survey Project: Paper	1, 2, 4, 5, 6, 7	5, 6, 7	2, 9	6, 10