

Introduction to Population and Public Health

SPRING 2026



SPRING 2026: Mondays and Wednesdays from 13:35-14:50

January 19, 2026 until Wednesday, April 29, 2026 — 0037 Rauch

Business Center 085. Schedule subject to change (last modif.: February 8 2026)



Instructor: Eric Mathieu Delmelle — Email: erd424@lehigh.edu

Student drop-in hours: Wednesdays 11.30 am-12.30 pm.

Virtual (zoom) appointments: email me please.

Office: HST - 139.

1 Catalog Description

Despite significant advances in medicine and public health, inequities in health persist. Understanding health on a population level is an approach that seeks to improve the health of the whole population, unravel variations in health outcomes, and to identify effective strategies for reducing or eliminating inequities. The purpose of this course is to provide students with an understanding of: 1) how population and public health are defined and measured; and 2) the determinants of population health.

2 Course Learning Outcomes

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

- 1) Understand Core Concepts in Population Health:

- Define key concepts such as population health, health equity, and social determinants of health.

2) Apply Measurement Techniques:

- Utilize foundational epidemiological measures (e.g., incidence, odds ratio, prevalence) and demographic tools to assess health outcomes and population dynamics.

3) Analyze Determinants of Population Health:

- Explore individual, interpersonal, community, and macrosystem-level determinants of health.
- Evaluate multilevel interactions between genetic, environmental, and behavioral factors over the life course.

4) Develop Evidence-Based Interventions:

- Propose and evaluate strategies for improving health outcomes using prevention, health promotion, and risk reduction principles.

5) Demonstrate Research and Communication Skills:

- Design and conduct studies employing sound research methodologies.
- Present findings through effective written, oral, and visual communication.

6) Address Health Inequities in Vulnerable Populations:

- Identify health disparities among diverse populations and propose culturally sensitive interventions.

3 Course Materials

The materials for our course come directly from the textbook by Young, T. K. (2004). **Population health: concepts and methods**, Oxford University Press. The book is available in the bookstore, but you can also find electronic copies of each chapter, uploaded on <https://coursesite.lehigh.edu> (note that the electronic copies are not as "nice" as the book). In addition to your textbook, you may be asked to read relevant articles (e.g. press, journal), which will be available online.

4 Grading Scale

Table 1 summarizes the correspondence between the percentage of grades, total points, and letter grades. You can earn up to 250 points in this course. There will be opportunities in the quizzes and in the assignments to get extra points. The majority of students obtained an A or A-.

5 Evaluation and Grading

All assignments are due by 11:59 pm EDT on the due date, unless otherwise specified during the semester. The *lowest grade* of the seven quizzes will be dropped. Table 2 summarizes the weights of the various assignments and due dates.

Table 1: Grading protocol

Percentage	Points	Letter Grade
$\geq 93\%$	232.5+ pts	A
$\geq 90\%$	225+ pts	A-
$\geq 87\%$	217.5+ pts	B+
$\geq 83\%$	207.5+ pts	B
$\geq 80\%$	200+ pts	B-
$\geq 77\%$	192.5+ pts	C+
$\geq 73\%$	182.5+ pts	C
$\geq 70\%$	175+ pts	C-
$\geq 67\%$	167.5+ pts	D+
$\geq 63\%$	157.5+ pts	D
$\geq 60\%$	150+ pts	D-
< 60%	<150 pts	F

6 Late Assignments/Papers:

Assignments are due before or on their due dates. Grades for assignments will be **reduced by 20% per day**, unless the due date has been discussed with the instructor ahead of the due date (Each student should contact the instructor in advance to arrange when an assignment is going to be late -e.g. conferences, travel plans, etc..). **Quizzes and Exam are NOT available after the deadline, except for the students who have some specific excuses, e.g. cited above, or require more time or different settings.** Medical emergencies may arise, and in these situations, I will not deduct points for the lateness if you provide a physician's note and if the assignment is submitted within 7 days (one week) of the deadline (weekends are considered as working days in this respect).

7 Assignments (47pts, $\approx 19\%$)

The assignments are aimed to assess your comprehension of basic population health concepts and issues. There will be five assignments (homeworks) in total. **All assignments are required to be completed.** Assignments are submitted to the Course Site. I will also assess your writing skills (spelling, grammar, and syntax). In case of essay questions, your response should be in a **double-spaced paper using 12-pt. Times Roman or Arial font with 1-inch page margins**. All assignments should be in Word format (i.e., doc or docx) or Google Docs, or Overleaf documents. We try to follow this protocol for naming assignments in this course: Your assignment file includes your last name, first initial, and the number given to the assignment; Example filename: **[DELMELLE_EM_Assignment1.docx]**. Please write your name on your assignment.

Table 2: Type of assignment, percentage, and due dates

Assessment Methods (250 points total)	Activity	Grade Percent (100% total)	Due Date
Assignments (47 points) (8-11 pts each)	Solve the Questions	≈ 19%	Assignment 1: 2/5 Assignment 2: 2/17 Assignment 3: 3/3 Assignment 4: 4/1 Assignment 5: 4/13
Quizzes (36 pts; 6 pts each) (7 quizzes; lowest dropped). (best 6 count)	In-class Quiz (MC/TF) 5–7.5 min eheat sheets	15%	Quiz 1: 2/2 (Mon) Quiz 2: 2/9 (Mon) Quiz 3: 2/23 (Mon) Quiz 4: 3/2 (Mon) Quiz 5: 3/30 (Mon) Quiz 6: 4/6 (Mon) Quiz 7: 4/20 (Mon)
Health News Presentation (4 points)	Individual presentation 60–120 sec	≈1.5-2%	Once per semester
Individual Paper (38 points)	Community Assessment	15%	Final Paper: 4/22
Peer Presentation (13 points)	Present peer community	5%	3/2 & 3/4
Group Work (63 points)	Presentation (15 min) & Report (8–12 pages)	25%	Topic due: 2/24 Checkpoint: 3/4 Slides due: 3/23 Presentations: 3/23 & 3/25 Report due: 3/27
Final Exam (50 points)	Online exam 180 min.	20%	COURSESITE May 5–13, 2026

Assignment Sequence:

- **Assignment 1 (Due 2/5):** Social & Environmental Determinants – establishes the structural framework early.
- **Assignment 2 (Due 2/23):** Population Health Theories / Socio-Ecological Model – provides organizing framework.
- **Assignment 3 (Due 3/3):** Comparing Health Events in Populations – measurement becomes interpretable.
- **Assignment 4 (Due 4/1):** Epidemic Investigation & Test Characteristics – measurement tools in context.
- **Assignment 5 (Due 4/13):** Assessing Causation (Bradford Hill, confounding, bias).

Access **Course Site** by going to <https://coursesite.lehigh.edu> and log in with your Lehigh credentials. For technical assistance, contact the Library and Technology Services help desk.

8 Health News Presentation (4pts, 1%)

Each student will present **once** during the semester at the beginning of class.

Format:

- Duration: **60–120 seconds**
- Present a current health event, news item, or demographic pattern that interests you.

Topics may include:

- Recent disease outbreaks or epidemiological developments.
- New political announcements related to health policies.
- Recently released health statistics or demographic data
- New public health measures or interventions.
- Emerging health trends in specific countries or populations.
- Notable or concerning demographic patterns.
- Any other health-related current event or topic of interest.

These presentations will help you stay anchored to real-world applications of course concepts and develop skills in identifying and communicating relevant population health information.

9 Class Participation:

Due to the comprehensive nature of the topics covered, attendance is mandatory for all class sessions. Students are expected to:

- Complete assigned readings before each session to facilitate meaningful discussions.
- Actively participate by sharing insights, opinions, and experiences to foster a collaborative learning environment.
- Contribute to discussions using tools such as *Poll Everywhere* for engagement and attendance tracking.

If absence is unavoidable, students should email me before the session.

10 Quizzes (36pts, 15%):

Seven quizzes will be administered throughout the semester on **Mondays**, reflecting on the topics we have covered, generally the week prior. These quizzes are not cumulative, and will only focus on the material from the previous quiz forward. The lowest score among the seven quizzes will be dropped (six quizzes count toward your grade).

Quiz Format & Timing:

- Quizzes are administered at the **beginning of class on Mondays**.
- Quiz duration: **5–7.5 minutes** (extended time for students with accommodations).
- Format: 3–5 questions, mostly multiple choice or short open-ended.
- **No cheat sheets allowed.**

Quiz Review:

- **Immediately after the quiz**, the instructor will review responses with the class.

Note that students who require a make-up quiz (or need another setting) will have the same format, but different questions.

11 Peer Presentation: Present a Classmate's Community (13pts, ≈ 5%)

Students will be assigned to groups of 2 (max 3). Each student will present **another student's community** (not their own) in a 2-3 minutes presentation.

Your presentation should:

- Briefly introduce the peer's community (location, basic demographics)
- Identify key population health issues or concerns
- Highlight main determinants across levels (individual, community, macrosystem)
- Note particularly interesting findings or unique characteristics

- Acknowledge that even affluent communities face health challenges

This format mirrors real academic/professional settings where individuals often summarize others' work and provides valuable peer feedback before final paper submission. Presentations will take place on **March 2 and March 4, 2026**. The presentation (PPT, Google Slides, or other format) must be uploaded via Course Site or link sent by email by 10am of March 2.

12 Individual Paper: Community Assessment (37.5pts, 15%)

You are expected to **conduct a critical assessment of your hometown community in terms of its multilevel health-promoting and health-inhibiting characteristics**. Your investigation may entail driving (or walking) around the community if you are currently in the area, reflecting on your previous experiences, interviewing others who live in the community, and internet research (e.g., county health rankings, publicly available community needs assessments, and other data) to learn more about the key characteristics of your county and/or state. If you are not sure whether there is sufficient data on your hometown to write about, you are welcome to look at a different scale (e.g. county, or local region) - but please talk to your instructor first.

You will write up your findings in an **8-page, double-spaced paper using 12-pt. Times Roman or Arial font with 1-inch page margins**.

Timeline:

- Peer presentations: **March 2 & 4, 2026** (before Spring Break).
- Final paper due **April 22, 2026**.

13 Group Work: 62.5 pts

Milestones (required):

- Initial Topic Selection (0 pts, required): **February 18, 2026**
- Midterm Report (6): **March 4, 2026**
- Oral Presentation (30 pts): **March 23 & March 25, 2026**
- Final Written Report (27 pts): **March 27, 2026**

Initial Topic Selection

The topic selection is a required formative submission. It ensures the proposed topic is feasible, appropriately scoped, and aligned with course objectives. Although ungraded, an approved topic selection is required to proceed.

Submission format: 1 page (bullet points acceptable)

Required elements:

- Proposed population health issue
- Population of interest and why they are affected
- Selected population health theory/model (or 2 candidate options)

- One-sentence statement for each determinant level you plan to cover (individual, interpersonal, community/organizational, policy/macrosystem)
- Initial division of responsibilities (who will draft which determinant level/section)
- 2–3 credible starting sources (at least 1 peer-reviewed)

Feedback focus: scope, feasibility, clarity of population definition, fit of theory/model, and ability to address multilevel determinants within an 8–12 page report.

Midterm Report Checkpoint

The midterm report is a structured progress checkpoint designed to ensure that groups are developing a coherent, evidence-based population health analysis that is on track for the final report. This is not a draft of the full paper, but a focused synthesis of work completed to date.

Submission format: 3–4 pages (double-spaced), plus references

Required elements:

- Clear restatement of the population health issue and population of interest
- Justification and brief explanation of the selected population health theory/model
- Preliminary synthesis of at least **two determinant levels** (e.g., individual and community), supported by peer-reviewed evidence
- Description of key data sources you are using or plan to use (e.g., surveillance data, census data, published studies)
- Brief outline of proposed intervention or policy implications aligned with the theory/model
- Updated division of group responsibilities and remaining tasks

Expectations:

- Writing should be analytical and evidence-based, not descriptive
- Claims must be supported with citations (APA format)
- Figures or tables are optional but encouraged if they clarify key patterns

Feedback focus: conceptual coherence, appropriate use of theory/model, depth of determinant analysis, quality of sources, and feasibility of completing the final report at a high level.

14 Final Exam (50pts, 20%).

The final exam will be cumulative and will therefore include questions regarding content covered during the entire semester. The exam will be worth 50 points and will consist primarily of **multiple choice and true/false questions**, with a few open-ended questions designed to assess deeper understanding and prevent reliance on AI tools.

The exam will be a timed online exam administered through CourseSite during the exam period: **May 5–13, 2026**. The exam is designed with approximately **2 minutes per question** and includes varied question types to ensure authentic demonstration of knowledge.

Final Exam Review Session: A comprehensive review session will be held during the last week of classes to help students prepare for the cumulative exam.

15 Electronic Devices

Electronic devices – including laptop, cell phones, tablets etc. – should be in silent mode during class. This means silencing cell phones and suspending email, texting, and phone calling during class. Should a true emergency arise that you must address, please quietly attend to it and return to class as quickly as possible.

16 Writing Policies

You are expected to submit assignments using proper English grammar, syntax, and spelling. You are encouraged to use spell check and grammar check prior to submitting your written work. All written work must be **double-spaced in 12-pt, Times Roman or Arial font**. Please make sure you have the **margins set to 1 inch**. The Writing Center is available to anyone who may need assistance. Grammar, syntax, and spelling will account for 10% of the grade for written work. Also, you are expected to utilize the APA Publication Manual as a guide for writing papers for this course, and the grading rubric will be based on its precepts.

Use of AI Tools The use of AI tools is a blessing and a curse. At times (in the case of programming) it can be helpful to get out of a coding jam quicker than searching on Google for a solution like in the olden days. **Strive so that most of the text turned in is your own words.**

17 Course Policies

17.1 Respect and Professionalism

Lehigh University endorses *The Principles of Our Equitable Community* ([link](#)). We expect each member of this class to acknowledge and practice these principles. Respect for each other and for differing viewpoints is a vital component of the learning environment inside and outside the classroom. You are expected to behave in a respectful and professional manner in this course. Disruptive and unprofessional behavior (rudeness, vulgar language, etc.) will result in warning, suspension, or dismissal from the course.

17.2 Academic Integrity

Students are bound by all sections of the *Lehigh University Student Code of Conduct*. You are responsible for making yourself aware and understanding the policies and procedures in the *Student Handbook* that relate to academic integrity. These policies include cheating, fabrication, falsification, forgery, multiple submission, plagiarism, conduct, complicity, and computer misuse. Please, see www.lehigh.edu/inprv/faculty/academicintegrity.html to access academic integrity resources.

17.3 Non-Discrimination

Lehigh University upholds *The Principles of Our Equitable Community* and is committed to providing an educational, working, co-curricular, social, and living environment for all students, staff, faculty, trustees, contract workers, and visitors that is free from harassment and discrimination. Such harassments or discriminations are not be tolerated.

The University strongly encourages (and, depending upon the circumstances, may require) students, faculty, staff, or visitors who experience or witness harassment or discrimination, or have information about harassment or discrimination in University programs or activities, to immediately report such conduct.

If you experience, witness, or become aware of such behavior, you are encouraged to report the incident to:

- **Lehigh University Police Department (LUPD):** 610-758-4200
- **Equal Opportunity Compliance Coordinator/Title IX Coordinator (EOCC):** 610-758-3535 or eooc@lehigh.edu

Anonymous online reporting forms are available:

- *Gender Violence Incident Notification Form*
- *Discrimination, Harassment, Retaliation, or Bias Incident Reporting Form*

More details can be found at <https://eooc.lehigh.edu/>.

17.4 Accommodations for Students with Disabilities

Lehigh University is committed to maintaining an equitable and inclusive community and welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact Disability Support Services (DSS), provide documentation, and participate in an interactive review process. If the documentation supports a request for reasonable accommodations, DSS will provide students with a *Letter of Accommodations*. Students who are approved for accommodations at Lehigh should share this letter and discuss their accommodations and learning needs with me early in the semester as possible.

For more information or to request services, please contact:

- **Disability Support Services:** Williams Hall, Suite 301
- Phone: 610-758-4152
- Email: indss@lehigh.edu
- Online: <https://studentaffairs.lehigh.edu/disabilities>

17.5 Religious Observances

If you have a religious observance that prevents you from doing work (e.g., quizzes, exams, or assignments) at its scheduled time, you will be given the opportunity to make up the work. You must notify the instructor at least **two weeks** prior to such an absence and propose how to make up for the missed academic work.

17.6 Notice Regarding Mandatory Reporting Obligations of Faculty

All faculty, staff, and administrators of Lehigh University are required by the **Policy on Harassment and Non-Discrimination** to report to the Equal Opportunity Compliance Coordinator/Title IX Coordinator and/or police any incident of bias, discrimination, harassment, retaliation, and sexual misconduct (including sexual harassment, sexual assault, stalking, dating violence, domestic violence, and sexual exploitation) that they become aware of, directly or indirectly, that involves students.

Mandatory reporting helps to ensure that students are connected to the full range of resources and options afforded to them. If you would like to speak with someone confidentially (someone who does not have a reporting obligation to the University), you are invited to contact any or all of the following internal and external resources:

- University Counseling & Psychological Services, Johnson Hall, 610-758-3880
- University Chaplain's Office, Dialogue Center, 610-758-3877
- Crime Victims Council of the Lehigh Valley, 610-437-6611 (24-hour hotline)
- Turning Point of the Lehigh Valley, 610-437-3369 (24-hour hotline)

More information can be found at <https://eooc.lehigh.edu> or by contacting the Equal Opportunity Compliance Coordinator & Title IX Coordinator, at eooc@lehigh.edu or at 610-758-3535.

18 Required Content for Individual Paper

1. Brief introduction

- (a) State the name of your local community. Please also specify which township/city, county, and state in which you reside.

2. Individual-level determinants of health

- (a) Describe your community in terms of its gender, age, race, and ethnic composition.
- (b) Discuss some protective (e.g., healthy diet, physical activity, positive screening behaviors, social distancing) and risky (e.g., smoking, unhealthy diet, substance misuse, etc.) health behaviors in which residents in your community (or county) typically engage.

3. Interpersonal-level and community-level determinants of health

- (a) Discuss health-promoting and health-inhibiting interpersonal-level determinants of health in your county. If you are unable to observe or find research on these determinants, this is understandable; please indicate if this is the case.
- (b) Discuss some of the social norms and policies in your neighborhood, workplace (or relative's workplace), and community in general.
- (c) Identify some community organizations that aim to address the broader determinants of health (e.g., food, transportation, housing, socioeconomic conditions, health care, etc.).
- (d) Identify and discuss some key stressors (e.g., crime, violence, poverty, racism/discrimination, etc.) in your study area.

4. Macrosystem-level determinants of health

- (a) Describe the socioeconomic profile (income level, level of education) of your community. How do you think this socioeconomic profile shapes the health of residents in your community/county?
- (b) Discuss the cultural profile (e.g., in terms of race and ethnicity, immigrant communities, etc.) of your county/community. How do you think this cultural profile may shape social norms in your county/community?
- (c) Describe some key aspects of the physical environment in your county/community and how they may shape health.
- (d) Discuss how politics may shape the health of residents in your community.
- (e) Discuss access to healthcare in your community, in terms of the distribution of insured/uninsured, use of public or private insurance, and physician-to-population ratio. Think about the other broader determinants of health. Describe one's access to health-promoting factors (e.g., affordable and healthy food sources, free or affordable opportunities for recreation, public transportation, affordable housing, and educational opportunities) in your community/county.
- (f) Think about the **DISTRIBUTION** of the health-promoting factors identified in 4e within your community/county. Do you feel that these resources are equitably distributed to most or all community residents? Why or why not?

5. Conclusion

- (a) Based on data (e.g., community health needs assessment, county health rankings), list the identified leading population health priorities in your community/county.
- (b) Discuss how this assignment has shaped your view of your local community/county.

19 Required Content for Group Presentation

Oral Presentation (15 minutes):

1. Brief Introduction

- (a) Topic of the presentation
- (b) Names of group members and category/level of determinant represented by each member

2. Background of Selected Health Issue/Disease

- (a) Describe the manifestation (i.e., signs and symptoms) of the selected health issue/disease.
- (b) Describe the prevalence of the health issue/disease in the US and/or globally.
- (c) Identify which part of the population the health issue/disease predominantly affects.
- (d) Discuss the short- and long-term impacts of the health issue/disease on the population.

3. Population Health Theory/Model

- (a) Describe the historical context (i.e., who developed it, when was it developed, etc.) of the selected population health theory/model.

- (b) Briefly describe the individual components/determinants that constitute the theory/model.
- (c) Briefly discuss the proposed relationships between the individual components/determinants and health/disease within the theory/model.
- (d) Briefly discuss the proposed interrelationships between the individual components/determinants within the theory/model.

4. Determinants of Selected Health Issue/Disease

- (a) Using the selected theory/model, discuss in detail how each category/level of determinants contributes to the selected health issue/disease. **EACH group member** is required to discuss the category/level of determinants he/she/they represent(s).
- (b) Imagine that your group is developing an intervention, policy, or research study to address or examine your selected health issue/disease. How would you **INTEGRATE** multiple determinants of health in your approach?

5. Citations

- (a) Please provide a list of citations at the end of the presentation.

20 Required Content for Group Written Report

The written report (8–12 pages, double-spaced) must be structured as follows:

1. Title Page (not counted in page length)

- Project title
- All group members' names
- Course information (POPH 001, Spring 2026)
- Date
- **Section responsibility matrix** – clearly indicate which member wrote which section

2. Executive Summary (1 page maximum)

- Concise overview of the health issue
- Key findings from your analysis
- Main recommendations

3. Background and Significance (1–2 pages)

- Detailed description of the health issue/disease
- Epidemiological data (prevalence, incidence, trends)
- Affected populations and health disparities
- Short- and long-term consequences
- Justification: Why is this issue important for population health?

4. Theoretical Framework (1–2 pages)

- Selected population health theory/model (e.g., Socio-Ecological Model, PRECEDE-PROCEED, Life Course Framework)
- Historical context and developers
- Key components and levels of the model
- Explanation of relationships between components
- Rationale: Why is this framework appropriate for your health issue?

5. Multilevel Determinants Analysis (3–5 pages total)

CRITICAL: Each group member must write 1–2 pages analyzing ONE level of determinants. Clearly label each subsection with the author’s name.

- **Individual-Level Determinants** [Author: _____]
 - Biological and genetic factors
 - Health behaviors (diet, physical activity, substance use)
 - Psychological factors (stress, mental health)
 - How these factors contribute to the health issue
- **Interpersonal-Level Determinants** [Author: _____]
 - Social networks and social support
 - Family dynamics and relationships
 - Peer influence and social norms
 - Cultural factors and health beliefs
- **Community/Organizational-Level Determinants** [Author: _____]
 - Built environment and neighborhood characteristics
 - Access to healthcare and community resources
 - Schools, workplaces, and institutional factors
 - Community organizations and social capital
- **Policy/Macrosystem-Level Determinants** [Author: _____]
 - Health policies and regulations
 - Economic systems and socioeconomic factors
 - Political context and governance
 - Cultural values and societal norms
 - Environmental and structural racism
- **Integration Across Levels** [Collaborative section]
 - How do determinants at different levels interact?
 - Feedback loops and cascading effects
 - Upstream vs. downstream factors

6. Intervention Approach (1–2 pages)

- Description of proposed intervention
- How the intervention addresses multiple determinant levels
- Target population and setting

- Implementation strategy
- Expected outcomes
- Evaluation plan (process and outcome measures)
- Sustainability considerations

7. Conclusion and Implications (1 page)

- Summary of key insights from your analysis
- Implications for practice
- Implications for policy
- Limitations of your analysis
- Future research directions

8. References (not counted in page length)

- Minimum 8–10 peer-reviewed sources
- APA 7th edition format
- Use of primary sources preferred
- No Wikipedia citations

Formatting Requirements:

- 8–12 pages (excluding title page and references)
- Double-spaced
- 12-pt Times Roman or Arial font
- 1-inch margins on all sides
- Page numbers
- APA format for in-text citations and reference list
- Headings and subheadings to organize content
- Tables, figures, or graphics as appropriate (do not count toward page limit if placed in an appendix)

Individual Accountability:

Each section analyzing a specific determinant level MUST be clearly attributed to its author. Use one of these formats:

- Section heading: "3.2 Individual-Level Determinants [Written by Jane Smith]"
- Footnote at beginning of section: "This section written by Jane Smith"
- Table on title page showing section assignments

This ensures that each group member's contribution is identifiable for grading purposes.

21 Pedagogical Spine and Course Philosophy

This course follows a carefully designed conceptual progression:

Structural Determinants → Measurement → Causation → Intervention → Modeling & Synthesis

This sequencing ensures that students understand **why** health outcomes are patterned (social and structural determinants) before spending extended time on **how** those patterns are measured and analyzed. By foregrounding determinants early, measurement becomes more interpretable, causal reasoning more grounded, and interventions more equity-focused.

The revised Spring 2026 structure responds directly to student feedback while maintaining academic rigor:

- **Earlier momentum on major assignments** – Group presentations moved to mid-semester to reduce stress and improve coordination
- **Structured synthesis opportunities** – Final week dedicated entirely to review and integration
- **Interactive learning** – Continued emphasis on in-class exercises and application
- **Regular formative feedback** – Brief quizzes with immediate review help students track understanding
- **Current events connection** – Student health news presentations link course concepts to real-world developments

Role of the Graduate Assistant

The grading assistant (GA) will review responses, clarifying common misconceptions. The instructor will relay this information to class, providing quick feedback to help students understand their performance and adjust their study strategies.

22 Tentative Course Schedule – Spring 2026

Week	Monday	Wednesday
1	<p>January 19, 2026</p> <ul style="list-style-type: none"> ● Introduction to Public Health and Population Health <ul style="list-style-type: none"> – Introduction to the syllabus. – Overview of course structure. – Introduction of each other. – Expectations RE: Peer presentations, group projects. – Presentation of topics. 	<p>January 21, 2026</p> <ul style="list-style-type: none"> ● Introduction to Public Health (chapter 1) <ul style="list-style-type: none"> – Prevention, promotion, and protection. – Historical evolution of public health. – Demographics: births and deaths ● Read CNN article on life expectancy. ● Read Chapter 1
2	<p>January 26, 2026 <i>on-line</i></p> <ul style="list-style-type: none"> ● Structural Foundations & Determinants of Health <ul style="list-style-type: none"> – Social gradient and structural inequities – Social, economic, and environmental contexts ● Groups are created. ● Introduction to Assignment 1 (Social & Environmental Determinants). 	<p>January 28, 2026</p> <ul style="list-style-type: none"> ● Structural Foundations <ul style="list-style-type: none"> – Housing, policy, labor conditions. – Community health assessments vs. population health assessments ● In-class group exercise: Identifying determinants in real communities ● Read Chapter 4 (sections on determinants)
3	<p>February 2, 2026</p> <ul style="list-style-type: none"> ● QUIZ 1 (beginning of class) ● Population Health Theories & Frameworks <ul style="list-style-type: none"> – Socio-ecological model – Life course perspective – Biopsychosocial model ● Introduction to Assignment 2. 	<p>February 4, 2026</p> <ul style="list-style-type: none"> ● Theories & Frameworks <ul style="list-style-type: none"> – Pathways from determinants to health outcomes – How do various determinants interact? ● In-class exercise: Identifying <i>moderators</i> and <i>mediators</i> on a causal pathway ● Assignment 1 due Feb 5

Week	Monday	Wednesday
4	<p style="text-align: center;">February 9, 2026</p> <ul style="list-style-type: none"> ● QUIZ 2 (beginning of class) ● Health News: Tj Akinyelu, Dakota Arnette ● Measuring Health and Disease in Populations <ul style="list-style-type: none"> – Rates, ratios, proportions – Incidence and prevalence <ul style="list-style-type: none"> * Population structure (age pyramids) * Demographic changes: fertility, mortality, migration * Preston curve: GDP vs. life expectancy ● In-class exercise: age pyramids ● Introduction to Assignment 2. 	<p style="text-align: center;">February 11, 2026</p> <ul style="list-style-type: none"> ● Health News: Isabella Borth, Arleth Cornielie ● Measuring Health and Disease in Populations <ul style="list-style-type: none"> – Demographic and health transition – Standardization in epidemiological research – Crude death rate – Standardized mortality rates ● Read Chapter 2
5	<p style="text-align: center;">February 16, 2026 on-line</p> <ul style="list-style-type: none"> ● Research Skills Workshop <ul style="list-style-type: none"> – How to access health data and library resources – Explore datasets (CDC, WHO, County Health Rankings) – APA citation and writing format – Bibliography tools ● Practice accessing datasets and analyze one indicator (e.g. HDI) ● Assignment 2 due Feb 17 	<p style="text-align: center;">February 18, 2026 off-line</p> <ul style="list-style-type: none"> ● Group work <ul style="list-style-type: none"> – Meet in groups in person or online – Decide on a topic worthy of investigation – Identify sources of prevalence (e.g. by county, state) – Identify potential determinants

Week	Monday	Wednesday
6	<p>February 23, 2026</p> <ul style="list-style-type: none"> • QUIZ 3 (beginning of class) • Health News: Zach Delano, Caroline Filamant • Measuring Health and Disease in Populations <ul style="list-style-type: none"> – Constructing life tables and deriving life expectancy – Potential years of life lost – Combining mortality and morbidity into DALYs • Introduction to Assignment 3. • Read Chapter 3 • Group topic due Feb 24 	<p>February 25, 2026</p> <ul style="list-style-type: none"> • Health News: Jaden Ferguson, Caitlin Golden • Health Indicators <ul style="list-style-type: none"> – Disease classification – Death certificates, health surveys, hospital records, disease registries – Reliability and validity of different data sources – Health indicators and indices
7	<p>March 2, 2026</p> <ul style="list-style-type: none"> • QUIZ 4 (beginning of class) • PEER PRESENTATIONS – Day 1 • Assignment 3 due Mar 3 	<p>March 4, 2026</p> <ul style="list-style-type: none"> • PEER PRESENTATIONS – Day 2 • Group Project Mid-term report due Mar 4
8	<p>March 9, 2026</p> <ul style="list-style-type: none"> • SPRING BREAK – No Class 	<p>March 11, 2026</p> <ul style="list-style-type: none"> • SPRING BREAK – No Class

Week	Monday	Wednesday
9	<p>March 16, 2026</p> <ul style="list-style-type: none"> • Health News: Lauren Greenberg, Alexa Handel • Epidemiological Measures <ul style="list-style-type: none"> – Sensitivity, specificity, and predictive values of diagnostic tests • Exercise: Understanding sensitivity and specificity among covid patients • Introduction to Assignment 4 	<p>March 18, 2026</p> <ul style="list-style-type: none"> • Health News: Alex Lien, Alana Natilli • Epidemiological Measures (continued) <ul style="list-style-type: none"> – Outbreak investigation logic – Measurement tools situated within social context • Group presentation preparation time
10	<p>March 23, 2026</p> <ul style="list-style-type: none"> • GROUP PRESENTATIONS • Presentation slides due by noon 	<p>March 25, 2026</p> <ul style="list-style-type: none"> • GROUP PRESENTATIONS • Group Report due March 27
11	<p>March 30, 2026</p> <ul style="list-style-type: none"> • QUIZ 5 (beginning of class) • Health News: Jake Norwood, Anneliese Ortiz • Causation – Risk Assessment & Bradford Hill <ul style="list-style-type: none"> – Risk Assessment framework – Hazard identification, dose-response, exposure assessment – Measures of association: odds ratio, relative risk • In-class exercise: Calculating and interpreting OR/RR • Introduction to Assignment 5 	<p>April 1, 2026</p> <ul style="list-style-type: none"> • Health News: Zoe Paisner, Connor Poole • Causation (continued) <ul style="list-style-type: none"> – Hume, Mill, Koch and Bradford Hill criteria – Integrating causation in risk models • Read Chapter 5 • Assignment 4 due April 1
12	<p>April 6, 2026</p> <ul style="list-style-type: none"> • QUIZ 6 (beginning of class) • Health News: Katryna Price, Hadjer Safa-Chaouche • Study Design <ul style="list-style-type: none"> – Study designs (RCT, case-control, cross-sectional, cohort) – Ethical concerns (vaccines, randomization) • Read Chapter 6 	<p>April 8, 2026</p> <ul style="list-style-type: none"> • Health News: Lizeth Severo, Aidan Soukas • Study Design (continued) <ul style="list-style-type: none"> – Validity, reliability, errors, bias and confounding – Confounding and bias in observational studies • In-class exercise: Identifying potential confounders

Week	Monday	Wednesday
13	<p style="text-align: center;">April 13, 2026</p> <ul style="list-style-type: none"> ● Health News: Ella Stack, Leah Strasser ● Planning Population Interventions <ul style="list-style-type: none"> – Types and levels of interventions – Criteria for screening programs – Behavioral models for health promotion – Cross-cultural issues ● Assignment 5 due ● Read Chapter 7 	<p style="text-align: center;">April 15, 2026</p> <ul style="list-style-type: none"> ● Health News: Divya Subramoni, Michelle Tellez ● Planning Interventions ● In-class exercises: Planning interventions (tobacco cessation, greenways, food in schools) ● Group report due
14	<p style="text-align: center;">April 20, 2026</p> <ul style="list-style-type: none"> ● QUIZ 7 (beginning of class) ● Health News: Jason Yonteff ● Evaluating Health Programs <ul style="list-style-type: none"> – Framework for evaluations – Evaluation methods – Economic appraisal – Case studies ● Read Chapter 8 	<p style="text-align: center;">April 22, 2026</p> <ul style="list-style-type: none"> ● Emerging Tools: Infectious Disease Modeling <ul style="list-style-type: none"> – Compartmental models: SIR (and optionally SEIR) – Core logic, assumptions, and interpretation – What models can and cannot do for policy ● Exercise: Simulating an outbreak ● Individual Paper due
15	<p style="text-align: center;">April 27, 2026</p> <ul style="list-style-type: none"> ● AI in Population Health <ul style="list-style-type: none"> – Prediction vs explanation – Targeting interventions – Fairness and ethics ● Cartography and Spatial Analysis in Population Health <ul style="list-style-type: none"> – Geospatial data & maps – Clusters, and ecological fallacy 	<p style="text-align: center;">April 29, 2026</p> <ul style="list-style-type: none"> ● OVERALL REVIEW + FINAL EXAM REVIEW <ul style="list-style-type: none"> – Practice questions and Q&A – Course wrap-up and reflections
		<p style="text-align: center;">FINAL EXAM PERIOD: May 5 – May 13, 2026</p> <p style="text-align: center;">Online via CourseSite – 50 pts (20%), MC/TF + Short Answers</p>