University of North Texas
Department of Rehabilitation and Health Services

PUBH 2010: Epidemiological Concepts and Methods for Public Health
Fall 2019
Section 001: Tuesdays & Thursdays: 12:30 P.M. – 01:50 P.M.
Class Location: LIFE A106

Instructor: Chisom Odoh, PhD, MPH
Office: Chilton Hall 238L
Office Hours: Tuesdays & Thursdays: 9:00 A.M – 10:00 A.M, or by appointment
Phone: 940-369-5356
Email: chisom.odoh@unt.edu

Course Description

The course explores fundamental epidemiologic concepts and methods used to examine the distribution and determinants of health and disease in and between populations. How do we figure out what causes disease in populations? Where, and when, does disease occur- and to whom? How can we use this information to create better prevention and treatment strategies? Course topics covered include a historical perspective, epidemiology success stories and contributions to public health. Other topics covered include introduction to epidemiologic study designs, measures of occurrence, such as incidence and prevalence, measures of association, including hazard, odds, risk, and rate ratios, statistical concepts as applied to epidemiology, and measures of disease burden, such as mortality and morbidity. Overall, students will learn and understand the basic principles and methods of epidemiology and how health and disease are influenced by biological, behavioral, socioeconomic, cultural, and environmental factors and much more.

Learning Objectives

- Understand the importance of epidemiology as it relates to public health
- Understand the patterns of disease and injury in human populations
- Demonstrate a basic understanding of and study design
- Combine appropriate epidemiological concepts and statistical methods
- Calculate epidemiological measures
- Describe epidemiologic study designs
- Identify and describe the impact of bias and confounding in epidemiologic studies
- Apply key ethical issues to conduct epidemiological and other scientific studies
- Identify key sources of data
- Critically evaluate epidemiologic studies.

Course Pre-requisites

NONE

The instructor reserves the right to amend this syllabus, and all other course materials as deemed necessary.
Teaching Philosophy

My teaching philosophy is centered on facilitating and enhancing student learning. Students are responsible for their own learning. Instructors can only provide opportunities to learn. To enhance student learning, active learning strategies will be used in every class, and formative feedback to tailor the course material and delivery for the class.

Course Materials

Required Texts


Required Equipment and Software

1. Scientific calculator. You may use a non-programmable calculator. Calculators on cellphones will not be accepted.
2. We will be using iClicker Reef, so each student must be registered to Reef and have a device (computer, smartphone or tablet) for polling responses for this course. Because iClicker Reef is flexible across devices, you may participate by choosing any option below:
   a) iClicker Reef app: You may use your own smartphone or tablet by downloading the app available for iOS and Android
   b) iClicker Reef website – app.reef-education.com (Links to an external site.) – for browser-based use.

With either option, you will create an account with iClicker, select University of North Texas as your institution, and enter your EUID in the Student ID (optional) space. Then click on “add course” and search for “PUBH2010” to enroll.

Available Resources for Learning

1) WHO epidemiology textbook: Basic Epidemiology, 2nd Ed. (Free; posted on Canvas)
2) OpenEpi (for epidemiologic calculations)
3) Other readings will be assigned as indicated on homework assignments or class slides.

Canvas

Please familiarize yourself with the technical requirements to complete this course:

1. Hardware and Software requirements for Canvas
2. Canvas Browser Check

The instructor reserves the right to amend this syllabus, and all other course materials as deemed necessary.
Technology Competencies/Skills
Students enrolled in the course must be prepared to perform the basic tasks below.

1. Send and receive email
2. Attach files to an email message
3. Use of basic Microsoft Office programs
4. Save files to an external device (e.g. flash drive, CD, or DVD)
5. Post and reply to discussion forums

Student Support Services
Also known at the University of North Texas campus as SSS. All activities and services provided by SSS are intended to help students progress through their degree to an on-time graduation. Please refer to the website (https://trio.unt.edu/sss) for detailed list of services.

Student Technical Support
The University of North Texas provides student technical support in the use of Canvas and supported resources. The student help desk may be reached at: Email: helpdesk@unt.edu

Student Evaluation
1. Class attendance and participation (10%)
   Attendance is mandatory for this course, given the nature of the content and its purpose. Participation includes being actively engaged in class discussions, assignments, and activities. Classroom participation denotes that you are present during class meetings, adequately prepared for class, and have read the assigned readings. Participation activities may be in the form of quizzes (e.g., pop quizzes), chapter assignments, reflections, group activities, etc.

2. Homework (5% each for a total of 30%)
   Six homework sets will be assigned periodically throughout the semester to assess individual assessment of course material. Homework questions may consist but will not be limited to calculations, multiple choice, short answer questions, and journal reviews.

3. Discussions (5% each for a total of 30%)
   Six discussion questions will be posted throughout the semester (see calendar). You are required to POST in your comments, read all of the posts of your classmates, and reply to two of the posts that you read. Please make sure you hit ‘QUOTE’ when you are replying to someone’s post or mention the name of the person whose post you are responding to, otherwise, I will not be able to follow what you are saying.

4. Exams (10% each for a total of 20%)
   There will be two exams given during the semester on the dates specified in the schedule. There will be no make-ups without prior consent or emergency situations that require a
written excuse. In the rare case of make-ups, you will have approximately 1 week to make arrangements and make up the exam. The instructor reserves the right to change the specific exam content (i.e., different questions on make-up exams that assess the same knowledge) and format.

5. **Group Presentation (10%)**

This will be an AdobeSpark VideoStory. Options will include:
- a VideoStory narrating a particular outbreak (e.g., the Zika virus outbreak)
- a disease-focused VideoStory (e.g., epidemiology of colon cancer)
- an exposure-focused VideoStory (e.g., the dangers of air pollution)
- an association-focused VideoStory (e.g., “does having pets decrease mortality rates?”)

**More details and a rubric for each of the options will be provided at a later date.** You will be put into a group of 5 people with common interests, based on a poll. Part of the assessment will be a peer evaluation.

Optional - Current Event for extra credit. Sometime before December 1, you can email me 5 PowerPoint slides summarizing a current event in epidemiology – for an extra 1% on your final average. Please provide 3-4 bullet points summarizing the article, some images, tables, or figures, and a link to the original article.

**Grading scale**

Your final grade will be based on the following scale:

- A: 90.0 - 100.0
- B: 80.0 - 89.9
- C: 70.0 - 79.9
- D: 60.0 - 69.9
- F: <60.0

**Course Policies – to assist learning**

Students are responsible for knowing and adhering to all university and college dates and deadlines. Such dates and deadlines include those for enrollment (registration), adding and dropping of courses, academic holidays, payment and refunds, and applying for graduation. In a case of emergency, it is the student’s responsibility to keep posted on all official University alerts or closures.

**Student Responsibilities**
- Take care of yourself so that you can be present (physically and mentally) in class. Thinking actively, in real time, with the instructor and the other students-- is the best way...
to learn the material! Therefore, attendance is required. Absences may be excused with a
doctor’s note (covering the day of the class missed), but the student is still responsible for
the material covered during that class period.

- Read the required materials prior to each class to prepare for class work and discussions.
- A student checks email and Canvas regularly for homework assignments and other
course-related communications, and updates to the syllabus schedule.
- A student completes assignments by the due dates that are communicated in class and
posted on Canvas.
- In all course activities, students apply the intellectual standards, especially clarity,
accuracy, relevance, significance, completeness, and logic.
- Students are responsible for and may be evaluated on anything in the assigned reading,
anything in class presentations and discussions, and anything that can be extracted or
extended from these sources using critical thinking and fundamental and powerful
concepts.

How I’m going to help
As the instructor in this course, I am responsible for providing course materials that will assist
and enhance your achievement of the stated course goals, guidance including:

- Providing timely and helpful feedback within the stated guidelines.
- Assisting in maintaining a positive learning environment for everyone.
- Treating you and your time with respect.
- A mid-semester feedback opportunity will be provided for you to give comments and
suggestions about the course.
- Will try to respond to questions via email within 24 hours (M-F).

Note: Other materials may be handed out in class

Excused Absences, Make-Ups, and Late Submissions
A student is excused from the in-class activities and participation provided he or she presents
written documentation from an approved source that provides a valid reason for the student to
have been unable to be present. Examples of approved sources are, without limitation,
physicians, nurse practitioners, licensed therapists, licensed funeral directors, university athletic
directors and designees, and university administration. The documentation must cover the
timeframe for the activity. No make-up is available for these, but the student’s final average is
not affected by his or her excused absence.

The instructor reserves the right to amend this syllabus, and all other course materials as deemed necessary.
Send me an email, with the note from the approved source (e.g., Doctor’s note) attached. The subject of the email must say “EXCUSED ABSENCE FOR (NAME, DATE),” e.g., EXCUSED ABSENCE FOR BEYONCE JONES, 10/5/19.

Late assignments are accepted with a penalty of 5% of the points for the assignment for each day or part thereof late, up to a maximum of 4 days late. After 4 days, the assignment will no longer be accepted and the student will receive a score of 0.

Communication with the Instructor

Personalized communication between instructor and student is important in enhancing the learning experience. The course instructors welcome conversations with students outside of class. Students may correspond with an instructor by email or set up an appointment. The primary means to contact me will be via e-mail: chisom.odoh@unt.edu. When sending an email, please put the course number and full name in the subject line (e.g., “Inquiries regarding PUBH 2010-Karen Smith). I am also available during my office hours. You may call or just come in. I will send out an e-mail in case I cannot hold office hours. Nevertheless, I am in and out of the office most days, but it is always good to let me know ahead of time when you plan to meet with me.

One-week Rule

It is the responsibility of the student to check his or her grade within one week after the grades have been posted. Any inquiry or appeal over the points posted must be made in writing to Dr. Odoh within 1 week after the scores are posted with a clear explanation about why you believe the points/grade you received was given in error. After the one-week period, changes to the posted graded will not be made.

Course Evaluation

Course evaluation is usually conducted during the last 2 weeks prior to final exams. I will post information about the date for evaluation on Canvas and e-mail each student when it becomes available.

Grades Incomplete

In general, students will not be allowed to take an Incomplete in the course. If you find you have a legitimate reason for needing to take an Incomplete (refer to UNT policy on requesting incompletes), please discuss with me as soon as possible.

Academic Integrity

All works submitted for credit must be original works created by the scholar uniquely for the class. It is considered inappropriate and unethical, particularly at the graduate level, to make duplicate submissions of a single work for credit in multiple classes, unless specifically requested by the instructor. Work submitted at the graduate level is expected to demonstrate higher-order thinking skills and be of significantly higher quality than work produced at the
undergraduate level. You are encouraged to become familiar with the university's Student Standards of Academic Integrity policy:

https://policy.unt.edu/sites/default/files/06.003.AcadIntegrity.Final_.pdf

Of particular interest are the following terms:

• Cheating – intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise. The term academic exercise includes all forms of work submitted for credit or hours.

• Plagiarism – the deliberate adoption or reproduction of ideas, words, or statements of another person as one’s own without acknowledgement.

• Fabrication – intentional and unauthorized falsification or invention of any information or citation in an academic exercise.

• Facilitating academic dishonesty – intentionally or knowingly helping or attempting to help another to violate a provision of the institutional code of academic integrity.

Students will receive no credit for the assignment or assessment on which the student engaged in academic misconduct.

Syllabus Revision

The course instructor reserves the right to modify any portion of this syllabus. Students are expected to be aware of any presented changes. A best effort will be made to provide an opportunity for students to comment on a proposed change before the change takes place.
The instructor reserves the right to amend this syllabus, and all other course materials as deemed necessary.

<table>
<thead>
<tr>
<th>Week</th>
<th>Readings</th>
<th>Lecture</th>
<th>Assignments</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>replies are due with homework</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 1</td>
<td>Syllabus and expectations</td>
<td>What is epidemiology?</td>
<td></td>
<td>8/27</td>
</tr>
<tr>
<td></td>
<td>Syllabus Chapter 1, pp. 1-22</td>
<td>History and scope of epidemiology</td>
<td>Class Introductions on Canvas</td>
<td>8/29</td>
</tr>
<tr>
<td>Week 2</td>
<td>Chapter 3, pp. 57-75</td>
<td>Measures of prevalence</td>
<td></td>
<td>9/3</td>
</tr>
<tr>
<td></td>
<td>Chapter 4, pp. 81-99</td>
<td>Measures of incidence</td>
<td></td>
<td>9/5</td>
</tr>
<tr>
<td>Week 3</td>
<td>Chapter 5, pp. 103-112</td>
<td>Descriptive epidemiology: Person, place, time</td>
<td>Discussion 1</td>
<td>9/10</td>
</tr>
<tr>
<td></td>
<td>Chapter 5, pp. 112-126</td>
<td>Descriptive epidemiology: Application and practice</td>
<td>Homework 1</td>
<td>9/12</td>
</tr>
<tr>
<td>Week 4</td>
<td><strong>Exam #1</strong></td>
<td></td>
<td></td>
<td><strong>9/17</strong></td>
</tr>
<tr>
<td></td>
<td>Chapter 6, pp. 129-137</td>
<td>Association and causality: Causal diagrams and causal pies</td>
<td>Groups for final project</td>
<td>9/19</td>
</tr>
<tr>
<td>Week 5</td>
<td>Chapter 6, pp. 137-143</td>
<td>Association and causality, cont. Bradford Hill Criteria</td>
<td>Discussion 2</td>
<td>9/24</td>
</tr>
<tr>
<td></td>
<td>Chapter 7, pp. 147-153</td>
<td>Study designs part 1</td>
<td>Homework 2</td>
<td>9/26</td>
</tr>
<tr>
<td>Week 6</td>
<td>Chapter 7, pp. 153-155</td>
<td>Study designs part 2</td>
<td>Discussion 3</td>
<td>10/1</td>
</tr>
</tbody>
</table>

IMPORTANT NOTE: The schedule and topics may change as the course unfolds, to allow flexibility. Please attend class, read email and check Canvas to stay current with assignments.
<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter(s)</th>
<th>Topic(s)</th>
<th>Assignment(s)</th>
<th>Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Chapter 7, pp. 155-158</td>
<td>Study designs part 3</td>
<td>Homework 3</td>
<td>10/3</td>
</tr>
<tr>
<td></td>
<td>Chapter 7, pp. 158-160</td>
<td>Study designs part 4</td>
<td></td>
<td>10/8</td>
</tr>
<tr>
<td></td>
<td>Chapter 2, pp 28-48</td>
<td>Hypothesis testing in epidemiology</td>
<td>Discussion 4</td>
<td>10/10</td>
</tr>
<tr>
<td></td>
<td>WHO textbook, pp. 67-73</td>
<td>Review of statistical concepts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Chapter 7, pp. 160-162</td>
<td>Bias, confounding, random error, internal validity, external validity</td>
<td>Homework 4</td>
<td>10/15</td>
</tr>
<tr>
<td></td>
<td>WHO textbook, pp. 52-58</td>
<td>Review for Exam 2</td>
<td></td>
<td>10/17</td>
</tr>
<tr>
<td>9</td>
<td>Chapter 9, pp. 189-198</td>
<td>Prevention and screening Chronic non-communicable diseases</td>
<td>Group topic due</td>
<td>10/24</td>
</tr>
<tr>
<td></td>
<td>WHO textbook, pp. 99-109</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chapter 8, pp. 168-184</td>
<td>Epidemiology and Health Policy</td>
<td>Group outline due</td>
<td>10/31</td>
</tr>
<tr>
<td>10</td>
<td>Chapter 9, pp. 198-202</td>
<td>Prevention and Screening, cont.</td>
<td></td>
<td>10/29</td>
</tr>
<tr>
<td></td>
<td>WHO textbook, pp. 110-114</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chapter 8, pp. 168-184</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Chapter 10, pp. 207-230</td>
<td>Infectious disease epidemiology</td>
<td>Discussion 5</td>
<td>11/5</td>
</tr>
<tr>
<td></td>
<td>WHO textbook, pp. 119-127</td>
<td>Outbreak investigations</td>
<td>Homework 5</td>
<td>11/7</td>
</tr>
<tr>
<td>12</td>
<td>Chapter 11, pp. 234-247</td>
<td>Social &amp; Behavioral Epidemiology</td>
<td></td>
<td>11/12</td>
</tr>
<tr>
<td></td>
<td>Chapter 11, pp. 247-253</td>
<td>Social &amp; Behavioral Epidemiology</td>
<td>Group storyboard due</td>
<td>11/14</td>
</tr>
<tr>
<td>13</td>
<td>Chapter 12, pp. 257-271</td>
<td>Social and behavioral epidemiology</td>
<td>Discussion 6</td>
<td>11/19</td>
</tr>
<tr>
<td></td>
<td>Chapter 12, pp. 271-275</td>
<td>Special epidemiologic application</td>
<td>Homework 6</td>
<td>11/21</td>
</tr>
<tr>
<td>14</td>
<td>Chapter 12, pp. 271-275</td>
<td>Special epidemiologic applications</td>
<td></td>
<td>11/26</td>
</tr>
</tbody>
</table>

*The instructor reserves the right to amend this syllabus, and all other course materials as deemed necessary.*
The instructor reserves the right to amend this syllabus, and all other course materials as deemed necessary.

## UNT Policies

**Academic Honesty Policy**
You are encouraged to become familiar with the University Student Code of Conduct maintained by the Dean of Students in the Office of Student Affairs: [Student Conduct Operations](https://www.unt.edu/deanofstudents/). You are encouraged to become familiar with the University Student Code of Conduct maintained by the Dean of Students in the Office of Student Affairs: [Student Conduct Operations](https://www.unt.edu/deanofstudents/).

**ADA Policy**
As per the Office of Disability Accommodation, a syllabus for a course SHALL include the following statement:

*The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Office of Disability Accommodation website at [http://disability.unt.edu/](http://disability.unt.edu/). You may also contact them by phone at 940.565.4323.*

**Add/Drop Policy**
The department adheres to add/drop schedule established and published by the UNT office of the registrar. See the registration calendar for information [https://registrar.unt.edu/registration/fall-registration-guide](https://registrar.unt.edu/registration/fall-registration-guide).
Important Notice for F-1 Students taking Distance Education Courses

Federal Regulation

To read detailed Immigration and Customs Enforcement regulations for F-1 students taking online courses, please go to the Electronic Code of Federal Regulations website at http://www.ecfr.gov. The specific portion concerning distance education courses is located at "Title 8 CFR 214.2 Paragraph (f) (6) (i) (G)" and can be found buried within this document: http://frwebgate.access.gpo.gov/cgi-bin/getcfr.cgi?TITLE=8&PART=214&SECTION=2&TYPE=TEXT

The paragraph reads: (G) For F–1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F–1 student's course of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

University of North Texas Compliance

To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.

If such an on-campus activity is required, it is the student's responsibility to do the following:

(1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.

(2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose.

Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office (telephone 940-565-2195 or email internationaladvising@unt.edu) to get clarification before the one-week deadline.