

University of North Texas at Dallas

Spring 2019

SYLLABUS

| PBHL 4310 - Epidemiology (3 hrs) | |
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| Department of Life and Health Sciences | Division of Liberal Arts and Life Sciences |
| Instructor Name: | William Garner, DrPH, MPH, FACHE |
| Office Location: | Founders Hall 260 |
| Office Phone: | (972) 338-1541 |
| Email Address: | william.garner@untdallas.edu |
| Office Hours: | Monday: 3:00-5:00 PM; Tuesday: 9:00-11:00 AM; Other times by appointment |
| Classroom Location: | Founders Hall 242 |
| Class Days & Times: | Monday: 11:30 AM – 12:50 PM |
| Course Description: | Overview of the principles and methods of epidemiology and their applicability to public health. Topics include history and practical applications of epidemiology, mortality and morbidity, sources of data, epidemiologic study design, measurement of disease frequency and effect, data interpretation, and screening for disease. |
| Prerequisites: | PBHL 2300 and MATH 1680 |
| Co-requisites: | None |
| Required Text: | <i>Essentials of Epidemiology in Public Health</i> by Aschengrau, Ann and Seage, George. [Jones & Bartlett Learning, 2014]. Third edition. ISBN: 9781284028911 |
| Learning Resources: | <p>UNT Dallas Library: (Founders Hall) phone: (972) 780-1616 web: http://www.untdallas.edu/library e-mail: library@untdallas.edu</p> <p>UNT Dallas Bookstore: (Building 1) phone: (972) 780-3652 web: http://www.untdallas.edu/bookstore e-mail: untdallas@bkstr.com</p> <p>UNT Dallas Writing Center: (Building 1) phone: (972) 338-1755 web: http://www.untdallas.edu/wc e-mail: learningcommons@untdallas.edu</p> |
| Course Goals or Overview: | |
| The goal of this course is to present major epidemiologic concepts used to study health and disease in populations with a focus on real-world applications and development of research skills. | |
| Learning Objectives/Outcomes: At the end of this course, the student will | |
| 1 | Describe the fundamental role of epidemiology in public health. |
| 2 | Distinguish the different approaches to understanding the causes of disease in population-based research |
| 3 | Calculate and correctly interpret the measures of the occurrence of disease and measures of association between exposure and disease. |
| 4 | Describe the major sources of health data and their limitations. |
| 5 | Determine whether a given association between exposure and disease is likely to be casual. |
| 6 | Understand the general approaches to disease surveillance and outbreak investigation. |

Hybrid Course Outline

This syllabus is subject to change by the instructor. This schedule may be revised. The instructor will communicate any changes to this schedule in class via class email or Canvas announcement.

| Week | Dates | Required Reading | Assessment |
|------|------------------------------|---|-----------------|
| 0 | January 14 | Introduction to the Course (Purchase Textbook) | Syllabus Quiz |
| | | Module: Course Overview | Module Tasks |
| 1 | January 15 - January 20 | The Approach and Evolution of Epidemiology (Chapter 1) | Reading Quiz |
| | | Module: Introduction to Epidemiology | Module Tasks |
| 😊 | January 21 | Martin Luther King Holiday | No Class |
| 2 | January 21 - January 27 | Measures of Disease Frequency (Chapter 2) | Reading Quiz |
| | | Module: Measures of Disease | Module Tasks |
| 3 | January 28 - February 3 | Comparing Disease Frequencies (Chapter 3) | Reading Quiz |
| | | Module: Disease Frequencies | Module Tasks |
| 4 | February 4 - February 10 | Sources of Public Health Data (Chapter 4) | Reading Quiz |
| | | Module: Public Health Data | Module Tasks |
| 5 | February 11 - February 17 | Descriptive Epidemiology (Chapter 5) | Reading Quiz |
| | | Module: Descriptive Epidemiology | Module Tasks |
| 6 | February 18 - February 24 | Overview of Epidemiologic Study Designs (Chapter 6) | Reading Quiz |
| | | Module: Epidemiologic Study Designs | Module Tasks |
| 7 | February 25 - March 3 | Ethics in Research Involving Human Participants (Chapter 17) | Reading Quiz |
| | | Module: Ethics in Research Involving Human Participants | Module Tasks |
| 8 | March 4 - March 10 | Midterm Examination Review Session (Chapters 1-6, 17) | Exam Review |
| | | Midterm Examination | Exam |
| 9 | March 11 - March 17 | Spring Break | Have Fun |
| 10 | March 18 - March 24 | Experimental Studies (Chapter 7) | Reading Quiz |
| | | Module: Experimental Studies | Module Tasks |
| 11 | March 25 - March 31 | Cohort Studies (Chapter 8) | Reading Quiz |
| | | Module: Cohort Studies | Module Tasks |
| 12 | April 1 - April 7 | Case-Control Studies (Chapter 9) | Reading Quiz |

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| | | Module: Case-Control Studies | Module Tasks |
| 13 | April 8 - April 14 | Bias (Chapter 10) and Confounding (Chapter 11) | Reading Quiz |
| | | Module: Bias and Confounding | Module Tasks |
| 14 | April 15 - April 21 | Random Error (Chapter 12) and Effect Measure (Chapter 13) | Reading Quiz |
| | | Module: Random Error and Effect Measure Modification | Module Tasks |
| 15 | April 22 - April 28 | Critical Review of Epidemiologic Studies (Chapter 14) | Reading Quiz |
| | | Module: Critical Review of Epidemiologic Studies | Module Tasks |
| 16 | April 29 - May 5 | The Epidemiologic Approach to Causation (Chapter 15) | Reading Quiz |
| | | Module: The Epidemiologic Approach to Causation | Module Tasks |
| 17 | May 6 - May 12 | Final Examination Review Session (Chapters 1-15, 17) | Exam Review |
| | | Final Examination | Exam |

Course Evaluation Methods

This is a hybrid course. Students will complete part of the course in a traditional classroom setting and part of the course via online instruction.

Traditional Classroom Instruction. This course meets once a week for face-to-face instruction. The topic of each class is provided in the Course Outline section of the syllabus. Through the in-class discussions and other assessments, students are expected to demonstrate mastery of assignment course content.

Online Instruction. Face-to-face meetings are supplemented by online instruction through weekly modules posted in Canvas. Each week's online instruction will begin at 12:00 (midnight) on Monday morning and ends at 11:59 p.m. on Sunday evening. Students should set aside approximately 3 hours each week to complete the module. The topic of each week's module is provided in the Course Schedule section of the syllabus. Through the modules, students are expected to demonstrate mastery of assignment course content by passing reading quizzes, completing a learning application exercise, and posting "high-quality" comments to discussion posts.

Class Requirements. Each week of this course is divided into three phases: (1) independent study to master identified objectives; (2) module tasks; and (3) term project (which begins after the midterm examination). Given the sequential nature of this course, Phases 1 and 2 must be completed by 11:59 p.m. on Friday evenings each week. This will afford students ample time to complete their term project work (Phase 3) by the weekly deadline by 11:59 p.m. on Sunday evenings each week.

Independent Study (Phase 1). Outside of Canvas, students are expected to remain current on course reading requirements. This means that students are expected to actively and critically read the assigned the required chapters of the textbook and assigned journal articles before beginning the modules each week. Successful students will complete Phase 1 activities during the first 2-3 days of each week.

Module Tasks (Phase 2). Each week, the module task consists of a reading quiz, a discussion post, and a learning application.

- *Reading Quizzes.* Each student will complete quizzes as part of the weekly modules. The objective of this activity is to evaluate whether the student has become well acquainted with the contents of the assigned reading. Each quiz will address questions specific to the assigned activities for the week. Quizzes are 5-10

multiple choice and true/false questions and should take 5 minutes to complete. Unless otherwise stated in Canvas, quizzes end at 10:00 a.m. on Monday morning.

- *Discussion Posts.* Each student will comment on at least one discussion post as part of the weekly modules. Discussion post comments must meet the “high quality” standard for this course. This means that comments must be 50-100 words, reflect the learning goals of the course and demonstrate a clear, in-depth understanding of the subject matter. Comments will be assigned a grade for originality and constructiveness based on the following rubric. Students will need three comments for full credit: An original initial post and two comments to other students’ comments. Unless otherwise stated in Canvas, discussion posts end at 11:59 p.m. on Friday evening.
- *Learning Applications.* Each student will complete learning applications as part of the weekly modules. The objective of this activity is to give students the opportunity to apply key concepts from the week’s reading and other course activities. Each learning activity is specific to the assigned activity for the week. Learning activities should take 30-60 minutes to complete. Unless otherwise stated in Canvas, learning applications end at 11:59 p.m. on Sunday evening.

Discussion Board Grading Rubric

| Points | Quality |
|--------|---|
| 5 | Demonstrates mastery of key concepts; constructively critiques work of others in a manner that stimulates discussion; provides ample citations for support of opinions; readily offers new interpretations of discussion material. Ideas are expressed clearly, concisely; uses appropriate vocabulary. Exceeds standards regarding quality and quantity of comments by posting more than 1 “high quality” comment to 2 or more students. |
| 4 | Demonstrates sufficient grasp of key concepts; critiques work of others, offering a divergent viewpoint or challenge; shows sufficient skill in support for opinions. Some sufficient organization with expression. |
| 2 | Shows evidence of understanding most major concepts; will offer an occasional divergent viewpoint or challenge; shows some skill in support for opinions. Some signs of disorganization with expression; transition wording may be faulty. |
| 1 | Has a mostly shallow grasp of the material; rarely takes a stand on issues; offers inadequate levels of support. Poor language use garbles much of the message; only an occasional idea surfaces clearly; expression seems disjointed; overuse of the simple sentence and redundancy with words and commentary; paragraphs often appear unrelated to each other. This student requires constant prompting for contributions. |
| 0 | No posting. |

Term Project (Phase 3). Students use an evidence-based approach to formulate an original hypothesis and develop a research proposal on epidemiological topic from a theme selected by the instructor. Students will keep their selected topic throughout the duration of the course. At the end of the first week, students should set aside approximately 3-4 hours each week to complete the term project. Each aspect of the term project must be uploaded to Canvas in Microsoft Word, unless otherwise stated.

Each of the following assignments is graded as term project:

- *Topic Selection.* Each student will secure instructor evaluation of the selected specific disease or health condition. Topic selection must follow the formatting guide provided for this activity as outlined in Canvas.

- *Preliminary Research.* Each student will prepare and submit an initial reference list based on the selected topic. Preliminary research must documents the required number of PubMed citations and must follow the formatting guide provided for this activity as outlined in Canvas.
- *Annotated Bibliography.* Each student will prepare and submit an annotated bibliography of the required number of peer-reviewed citations. The annotated bibliography must follow the formatting guide provided for this activity as outlined in Canvas.
- *Initial Draft.* Each student prepare and submit an initial written report of the term project. The report should be 500 – 750 words approximately 2-3 pages. The report must follow the formatting guide provided for this activity as outlined in Canvas.
- *Final Draft.* Each student prepare and submit a final written report of the term project. The report should be 500 – 750 words approximately 2-3 pages. The report must follow the formatting guide provided for this activity as outlined in Canvas.

Midterm Examination. Each student will take a midterm exam that will cover materials from the course, primarily the assigned reading from the required textbook. Students will answer questions from Weeks 1-7. Once you open the exam, you must complete it on the first attempt. Students will only have one try to take the midterm examination.

Final Examination. Each student will take a final examination that will cover materials from the course, primarily the assigned reading from the required textbook. Students will answer questions from Weeks 1-16. Once students open the exam, s/he must complete it on the first attempt. Students will only have one try to take the final examination.

Class Participation and Attendance. Regular attendance is expected of each student. Persistent absence will affect the students grade for class participation. Repeated unexcused absences and tardiness will affect the students grade significantly. Two tardies is the equivalent of one absence. Leaving class before the end of the period will be considered an absence. Whether excused or unexcused, the attendance grade will suffer due to absences and tardies. Students will lose 5 points per absence (or 2.5 points per tardy). After the eighth absence, student will receive a failing grade for the entire class and/or dropped from the course.

Use of Personal Technology. If not otherwise specified by the instructor, cell phones, laptops, I-Pads, Kindles, and other electronic devices **MUST** be switched off and placed out of sight during class. If it is visible to the instructor, s/he will receive a **ZERO** grade for participation on that day. The use of laptop computers in class is not allowed. Moreover, if the student need to leave the classroom during class, let the instructor know the reason for leaving; otherwise s/he will receive a **ZERO** grade for participation on that day. Anyone who is observed text messaging or using an electronic device during class will receive a **ZERO** grade for participation on that day as well. Additionally, students may not *record lectures* or take pictures in the class without special permission.

Grading Matrix:

| Assessments | Available (points) | Earned (points) |
|----------------------------|--------------------|-----------------|
| Module Tasks | | |
| Reading Quizzes (15) | 150 | |
| Discussion Posts (15) | 150 | |
| Learning Applications (14) | 140 | |
| | | |
| Term Project | | |
| Topic Selection | 10 | |
| Research Question | 25 | |
| Preliminary Research | 25 | |
| Annotated Bibliography | 50 | |
| Initial Draft | 75 | |
| Final Draft | 100 | |
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| Examinations | | |
| Midterm Examination | 100 | |
| Final Examination | 100 | |

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| Total: | 925 |
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Grade Determination:

- A = 833-925 points
- B = 740-832 points
- C = 648-739 points
- D = 555-647 points
- F = less than 555 points

Students with Disabilities (ADA Compliance). The University of North Texas at Dallas makes reasonable academic accommodation for students with disabilities. Students seeking accommodations must first register with the Disability Services Office (DSO) to verify their eligibility. If a disability is verified, the DSO will provide the student with an accommodation letter to be delivered to the faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time; however, DSO 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/communicate with each faculty member before 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 Disability Services Office website at <http://www.untDallas.edu/disability>. You may also contact them by phone at 972-338-1777, by email at UNTDisability@untDallas.edu, or at by visiting Founders Hall Room 204.

Diversity/Tolerance Policy. Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions, which violate the Code of Student Conduct, will be referred to the Office of Student Life, as the instructor deems appropriate.

Canvas Instructure Accessibility Statement. University of North Texas at Dallas is committed to ensuring its online and hybrid courses are usable by all students and faculty including those with disabilities. If student encounter any difficulties with technologies, s/he should contact the ITSS Department. To assist them better, students would want to have the operating system, web browser and information on any assistive technology being used. Canvas Instructure course management system's accessibility statement is also provided: <https://www.canvaslms.com/accessibility>.

Additional instructional technology tools, such as Turnitin, Respondus, Panopto, and publisher cartridge content (i.e., MyLab, Pearson, etc.) may NOT be fully ADA compliant. Please contact our Disability Office should you require additional assistance utilizing any of these tools.

Technology Requirements. In order to successfully access the materials in an online or hybrid course, UNT Dallas advises that student computers be equipped with the minimum system requirements listed on the first page of the syllabus.

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| <p>Supported Browsers: Chrome Firefox Flash 28, 29 (for audio/video) Internet Explorer 11 Safari 10, 11</p> <p>Supported Devices: iPhone Android Chromebook (Tablet users can use the Canvas app)</p> | <p>Getting Help with Canvas:</p> <p>Canvas 24 /7 Phone Support for Students: 1-833-668-8634</p> <p>Canvas Help Resources: https://community.canvaslms.com/docs/DOC-10701</p> <p>For additional assistance, contact Student Assistance (Distance Learning): Founders Hall, Rm 124 phone: (972) 338-5580 email: distancelearning@untDallas.edu</p> <p><i>Students working with Canvas 24/7 Support to resolve a technical issue should make to keep the professor updated on the troubleshooting progress.</i></p> |
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If students experience difficulty accessing or using components of the course, s/he should try using Google Chrome browser. If the student still experience technical difficulties, first, notify the instructor. If the problem is still not resolved, call Canvas 24/7 Help Desk at the phone number listed on the first page of the syllabus. Also, no matter what browser in use, always enable pop-ups. For more information see:

- <http://www.untDallas.edu/dlit/ecampus/requirements>
- <https://community.canvaslms.com/docs/DOC-10701>

Classroom Etiquette. Any student whose behavior disrupts the learning environment will be asked to leave the class. Any violation of classroom etiquette may result in a loss of points or removal from the course and referral to the Dean of Students, including warnings and other sanctions in accordance with the University's policies and procedures. Disruptions, which violate the Code of Student Conduct, will be referred to the Office of Student Life, as the instructor deems appropriate. Refer to the Student Code of Student Rights Responsibilities and Conduct at <http://www.untDallas.edu/osa/policies>.

Online "Netiquette": In any social interaction, certain rules of etiquette are expected and contribute to more enjoyable and productive communication. Emails, Discussion Board messages and/or any other forms of written communication in the online environment should use proper "netiquette" (i.e., no writing in all caps (usually denotes yelling), no curse words, and no "flaming" messages (angry, personal attacks). Racial, ethnic, or gender slurs will not be tolerated, nor will pornography of any kind. Any violation of online netiquette may result in a loss of points or removal from the course and referral to the Dean of Students, including warnings and other sanctions in accordance with the University's policies and procedures. Refer to the Student Code of Student Rights Responsibilities and Conduct at https://www.untDallas.edu/sites/default/files/page_level2/hds0041/pdf/7_001_student_code_of_conduct_may_2014.pdf. Respect is a given principle in all online communication. Therefore, please be sure to proofread all written communication prior to submission.

Certain behaviors are expected when communicating with both peers and instructors. The following netiquette guidelines are required for this course:

- Treat instructor with respect, even in e-mail or in any other online communication.
- Always use your professors' proper title: Dr. or Prof., or if you in doubt use Mr. or Ms.
- Unless specifically invited, do not refer to them by first name.
- Use clear and concise language.
- All communication should have correct spelling and grammar.
- Avoid slang terms and texting abbreviations (such as "u" instead of "you").
- Be cautious when using humor or sarcasm, as tone is sometimes lost in an email or discussion post, and your message might be taken seriously or offensive.
- Use standard fonts and avoid using caps lock feature as it can be interpreted as yelling.
- Limit and possibly avoid use of emoticons like 😊.
- Be careful with personal information

Discussion Board Netiquette.

- Make posts that are on topic and within the scope of course material.
- Take your posts seriously, review, and edit your posts before sending.
- Always give proper credit when referencing or quoting another source.
- Be sure to read all messages in a thread before replying.
- Do not repeat someone else's post without adding something of your own to it.
- Avoid short, generic replies such as "I agree", you should include why you agree or add to the discussion.
- When you disagree with someone, you should express your differing opinion in a respectful, non-critical way.
- Do not make personal or insulting remarks.
- Be open-minded.

E-mail Netiquette

- Use a descriptive subject line.
- Avoid attachments unless you are sure your recipients can open them.
- Avoid HTML in favor of plain text.
- Sign your message with your name and return e-mail address.

Students attending Brigham Young University-Idaho created two videos that explain discussion board basics and netiquette.

Byuicurdev. (2012, June 12). *Discussion board netiquette*. [Video file]. Retrieved from <http://www.youtube.com/watch?v=DwdqQjCfWSc>

Byuicurdev. (2012, May 10). *Discussion board basics*. [Video file]. Retrieved from <http://www.youtube.com/watch?v=jvLs96eQ2Gc>

Student Evaluation of Teaching Effectiveness Policy. The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available at the end of the semester, providing opportunity to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Assignment Policy. Assignments must be turned in on time. Late work is not accepted unless the instructor has approved it in writing before the due date.

Exam Policy. Exams must be taken as scheduled. No make-up examinations will be allowed except for documented emergencies (See Student Handbook). Online exams may be proctored on campus per instructor's discretion.

Academic Integrity. Academic integrity is a hallmark of higher education. All students are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic Integrity at http://www.unt.edu/unt-dallas/policies/Chapter%2007%20Student%20Affairs,%20Education,%20and%20Funding/7.002%20Code%20of%20Academic_Integrity.pdf for complete provisions of this code.

The University academic integrity policy is in effect for this course. Academic dishonesty includes, but not limited to, cheating, plagiarism (including self-plagiarism), improper collaboration, and/or the fabrication, falsification or alteration of information. Any act of academic dishonesty will be reported to the Dean of Liberal Arts and Sciences and the Dean of Students and may result in a grade of F on the assignment, removal from the course with a final grade of F, and any other sanction as deemed appropriate for the offense, including suspension or expulsion.

Please be aware in some online or hybrid courses; therefore, students may be required to submit written assignments to Turnitin, a web-based plagiarism detection service, or another method. If submitting to Turnitin, please remove the title page and other personal information.

Attendance and Participation Policy. The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Students may not skip a week or plan to "catch-up" on previous week activities.

This course follows a structured, week-by-week format. Each week, students are expected to participate, electronically, on multiple occasions each and every week. Each week begins at 12:00 (midnight) on Monday morning and ends at 11:59 p.m. on Sunday evening. Students should spend a minimum of 6 hours per class each week to complete course activities. This time can be whenever it is convenient since all of the online classes are conducted in an asynchronous environment. This means there are no particular times set for responses and submissions but there will be weekly deadlines.

Students are responsible to notify the instructor if they are missing class and for what reason. Should a student need to miss scheduled class activities for any reason, it is expected that he/she inform the course instructor – by email – prior to the due date of the activity or assignment (only emergency situations will be exempt from this expectation). It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent.

Attendance for this online or hybrid course is considered when logged in and active in Canvas, i.e., posting assignments, taking quizzes, or completing discussion boards. To maintain financial aid award eligibility, activity must occur before the census date of the session or term of the course. Refer to <http://www.untDallas.edu/registrar> for specific dates. If students are absent/not active in the course shell, it is the his/her responsibility to let the instructor know immediately, upon return, the reason for the absence if it is to be excused. All instructors must follow university policy 7.005 covering excused absences; however, it is the instructor's discretion, as outlined in the course syllabus, of how unexcused absences may or may not count against successful completion of the course

Inclement Weather and Online Classes. Online classes may or may not be affected by campus closures due to inclement weather. Unless otherwise notified by your instructor via e-mail, online messaging, or online announcement, students should assume that assignments are due as scheduled.