

**Murphy Deming College of Health Sciences  
Mary Baldwin University  
HCA Program**

**HCA261-Epidemiology**

**Credit Hours: 3**

**Spring 2021**

**Course Format: Online**

**Course Start and End Dates: January 11, 2021 – April 19, 2021**

**Course Instructor – Lindsey Fletcher, DNP, APRN, FNP-C**

**Office Hours** – Monday 9:00 AM to 12:00 PM, Wednesday 4:00 PM to 7:00 PM; I will be available on the phone or via email.

**Contact Information:**

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904-654-6482

**Course Description:**

Epidemiology is the study of the distribution and determinants of health and disease in population. This course introduces the foundational concepts and principles of Epidemiology. Students will be provided with the basis for conducting and interpreting epidemiological studies. We will examine study design types and how to choose an appropriate one using real world examples. The techniques of descriptive and analytical epidemiology will be presented. We will also discuss measures of disease frequency and quantitative measures to determine risk association. Causality and validity will also be discussed. Additionally, the course project gives you the opportunity to critically examine and analyze a study on a topic that interests you.

**Course Prerequisites:** None

**Course Objectives:** At the completion of this course the student will be able to:

1. Describe what epidemiology is and how it relates to other public health disciplines
2. Describe general uses and applications of epidemiology
3. Describe commonly used methods in epidemiology
4. Recognize and interpret epidemiologic study designs
5. Apply epidemiologic principles to health evaluation studies and recognize strengths and limitations of effectiveness research studies

**Course Format:** This course will be delivered online. Readings and assignments designed to develop applied skills will form the basis for review and discussion during the weekly class posting on the discussion board. Reading assignments, PowerPoint presentations, and web links will serve as the basis to present key points. Weeks begin on Monday and end on Sunday at midnight.

**Course Textbooks and Other Learning Resources:**

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6<sup>th</sup> ed.). Washington, D.C.: Author.

Celentano, D., & Szklo, M. (2019). *Gordis epidemiology*, (6<sup>th</sup> ed). Elsevier. ISBN: 978-0-0323-55229-5

**Murphy Deming College of Health Sciences Policies:**

Americans with Disabilities Act:

Students with Disabilities – Academic Resource Center, Accessibility Services Program  
Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 require Mary Baldwin University/Murphy Deming College of Health Sciences to provide academic adjustments or accommodations for students with documented disabilities. Students who require reasonable accommodations must identify themselves as having a disability and/or medical condition and provide current diagnostic documentation to Dr. Jenny Joczlik, Director, Academic Resource Center / Accessibility Services Program Coordinator. All information is confidential. Please visit the office’s website at <https://go.marybaldwin.edu/learning-skills/swd/> or contact Dr. Joczlik at [vjoczlik@marybaldwin.edu](mailto:vjoczlik@marybaldwin.edu). Additional information about accessibility services can be found in the student handbook.

Academic Integrity Policy and Professional Behavior Expectations:

The students, faculty, and administration of the Murphy Deming College of Health Sciences join together in support of the Honor Code for the purposes of a) providing an atmosphere of mutual trust, concern, and respect; b) fostering honorable and ethical behavior; and c) cultivating lifelong professional conduct. To promote these purposes matter regarding misconduct shall fall under the jurisdiction of the Honor Code, while other aspects of a student’s graduate education will be covered by the guidelines stated in the Student Handbook.

Students are expected to adhere to the ethical and professional standards associated with their programs and academic courses. Unethical or unprofessional behavior will be treated in the same manner as academic dishonesty.

Please see the complete Social Media Policy in the Student Handbook.

For additional information related to Academic Integrity and/or Professional Behavior expectations please see the Student Handbook.

Communication Between the Program and Students:

E-mail- All official student communication from the Vice President, School and Program Directors, Course Instructor, faculty, and staff will be sent to the student's MBU e-mail address ONLY. The program will not send e-mail to personal accounts other than MBU. Students are required to check their MBU email accounts often, even while on vacation or away from campus.

Attendance Policy:

Attendance in the online course is required and defined as active participation in the course. Online courses will, at a minimum, have weekly assignments to record student participation, which can be documented by any or all of the following methods:

- Completion of tests
- Submission/completion of assignments
- Participation in Discussion Forums
- Communication with the instructor

Students who do not log on to the course within the drop/add period will be dropped from the course. (Drop/add and withdrawal dates are listed in the published semester schedule and University Academic Catalog). Students who fail to maintain active participation in an online course as defined in the course syllabus will be processed in accordance with the University's current attendance policy, which may include any of the following actions:

- Meeting with the course instructor or the Program Director
- Meeting with the faculty advisor
- Referral to the faculty committee to determine an appropriate course of action which may include any of the following:
  - Warning letter to be placed in the student's temporary file
  - Letter of reprimand to become part of the permanent record with the Registrar
  - Dismissal from the Program

Mandatory Follow Up With Instructor:

Students scoring a grade of "C" or below on the first scheduled examination/test/assignment in a course will be required to meet with the course instructor to discuss test/assignment performance. Students are expected to have reviewed the examination/test/assignment and be prepared to talk with the course instructor about strategies for improvement.

**Course Policies:**

Schedule Management:

Students are expected to keep track of the course schedule and assignments, as well as any changes that are announced. If conflicts arise please notify the instructor immediately.

Communication of Problems:

Students having difficulty with grasping course content, assignments, or time management should talk to the instructor for assistance as early as possible.

Recorded Lectures:

Duplication or redistribution of recorded materials by students is prohibited. Students may not copy or redistribute lecture capture materials. Unauthorized duplication or dissemination of lecture capture materials may violate federal or state law and University policy. Violation of University policy may result in disciplinary action.

**Course Content Outline: Course Schedule**

**All assignments due by 11:59 p.m. Eastern Standard Time (EST)**

	<b>Module Title/Topics and Readings</b>	<b>Start Date</b>	<b>End Date</b>	<b>Learning Activities and Due Dates</b>
<b>Module</b> <b>Week</b> <b>1</b>	<i>Introductions and History of epidemiology; Public health and epidemiology</i>  <b>Readings/Resources:</b>  <b>Gordis, Ch 1, 19</b>			<b>Discussion Board Forum 1</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Learning Activity 1:
<b>Module</b> <b>Week</b> <b>2</b>	<i>Infectious disease transmission; Notifiable Conditions</i>  <b>Readings/Resources:</b>  <b>Gordis, Ch 2</b>			<b>Discussion Board Forum 2</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Learning Activity 2:

<b>Module</b> <b>Week</b> <b>3</b>	<i>Descriptive Epidemiology I: Outbreak Investigations</i>  <b>Readings/Resources:</b> <b>Gordis Ch 3</b>  <b>Lesson 6 Investigating an Outbreak</b> <a href="http://cdc.gov/csels/dsepd/ss1978/lesson6/section1.html">cdc.gov/csels/dsepd/ss1978/lesson6/section1.html</a>			<b>Discussion Board Forum 3</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Semester Paper, Section 1 DUE:
<b>Module</b> <b>Week</b> <b>4</b>	<i>Descriptive Epidemiology II: Measure of disease frequency</i>  <b>Readings/Resources:</b>  <b>Gordis, Ch 4</b>			<b>Discussion Board Forum 4</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Learning Activity 4:
<b>Module</b> <b>Week</b> <b>5</b>	<i>Adjusting Rates: Survival and Life Tables</i>  <b>Readings/Resources:</b>  <b>Gordis, Ch 6</b>			<b>Discussion Board Forum 5</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Learning Activity 5:

<b>Module</b> <b>Week</b> <b>6</b>	<i>Diagnostic and Screening tests</i>  <b>Readings/Resources:</b>  <b>Gordis, Ch 5</b>			<b>Discussion Board Forum 6</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Semester Paper, Section 2 DUE:
<b>Module</b> <b>Week</b> <b>7</b>	<i>Surveillance; Environmental Public Health Tracking</i>  <b>Readings/Resources:</b>  Gordis, Ch 3 (Pages 42-46)			<b>Discussion Board Forum 7</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Learning Activity 7:
<b>Module</b> <b>Week</b> <b>8</b>	<i>Midterm Review, Discussion of Study Questions for Semester Paper</i>  <b>Readings/Resources:</b>  On-line discussion/question & answer			<b>Discussion Board Forum 8</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD

<b>Module</b> <b>Week</b> <b>9</b>	<i>Experimental epidemiology; Randomized trials</i>  <b>Readings/Resources:</b>  <b>Gordis, Ch 7 &amp; 8</b>			<b>Discussion Board Forum 10</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD
<b>Module</b> <b>Week</b> <b>10</b>	<i>Cohort studies</i> <i>Biomarkers</i>  <b>Readings/Resources:</b>  <b>Gordis, Ch 9 &amp; 16</b>			<b>Discussion Board Forum 11</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Semester Paper, Section 3 DUE:
<b>Module</b> <b>Week</b> <b>11</b>	<i>Case-control studies</i> <i>Cross-sectional studies</i>  <b>Readings/Resources:</b>  <b>Gordis, Ch 10 &amp; 13</b>			<b>Discussion Board Forum 12</b>  Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Learning Activity 11:

<b>Module</b>	<i>Estimating risk; Estimating the potential for prevention</i>			<b>Discussion Board Forum 13</b>
<b>Week</b>				
12	<b>Readings/Resources:</b>  <b>Gordis, Ch 11 &amp;12</b>			Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Learning Activity 12:

<b>Module</b>	<i>Casual inference; Assessing causality</i>			<b>Discussion Board Forum 14</b>
<b>Week</b>				
13	<b>Readings/Resources:</b>  <b>Gordis, Ch 14 &amp; 15</b>			Discussion start: Discussion end:  Initial response: Peer responses:  <b>Optional Synchronous Session:</b> Date/time TBD  <b>Assignment:</b> Semester Paper, Section 4 (FINAL PAPER) DUE:

<b>Module</b>	<i>Final Exams</i>			Final Exam
<b>Week</b>	<i>Final Projects</i>			
14	<i>Final Grades</i>			Power Point DUE

### **Late Assignments:**

Students must notify the instructor if the assignment will be turned in late. Late assignments, unless otherwise indicated by the instructor, will be reduced by 1 (one) letter grade per day for up to 5 (five) days. After 5 (five) days, the late assignment will become a 0 (zero). Extensions are granted at the instructor's discretion. Extenuating circumstances DO NOT include computer, internet, hardware/software issues or planned vacations.

### **Discussion Boards:**

The **initial** posting for each Discussion Board forum is due no later than Thursday at 11:59pm EST. The two **response** postings are due no later than Sunday at 11:59pm EST. Discussion Board forums end each week on Sunday at 11:59pm EST, unless otherwise indicated. See course schedule for details.

Ten (10) points per day will be deducted for late **initial** discussion board postings, up to 3 days. After the third day late, the student will receive a "zero" for that component of the Discussion Board forum. Late response postings will automatically receive a grade of "zero" due to the inability to interact with peers and/or faculty once the Discussion Board forum has ended.

### ***Assignment Descriptions:***

#### **Discussion Boards and Class Participation (20%):**

A total of (13) discussion board forums on varied topics are assigned for your participation. You are required to post an original response to the discussion board question/scenario and at least two responses to your classmate's posts. High-quality, thoughtful, and appropriate responses to the discussion prompts are expected.

**Assignments** (20%) To include a PowerPoint presentation at the end of the course

**Project Paper:** (30%) A course paper will constitute a portion of the grade. The project paper will be drafted in three sections with specific due dates for each section.

- Section 1: Descriptive epidemiology of selected chronic disease
- Section 2: Problem Statement and study question
- Section 3: Epidemiologic study design
- Section 4: Final Paper

The first three due dates will serve as check points to allow an opportunity for the student and instructor to discuss the student's chosen topic and study question and revise these sections as necessary. The final paper will include all four sections.

**Midterm exam** (15%)

**Final exam** (15%)

#### **Optional Synchronous Sessions:**

Optional synchronous sessions are live Blackboard Collaborate video sessions led by the instructor. The sessions are designed to give students and the instructor an opportunity for live, face-to-face interaction to

discuss course topics. The sessions will be live and will also be recorded and posted in Blackboard. These sessions are optional and attendance is not recorded. Attendance at these sessions is not mandatory or worth any percentage of the participation or final grade.

**Course Evaluation:**

Students are expected to provide feedback on the quality of instruction in this course by completing an online evaluation. Details will be provided before the end of the course, including specific times when the evaluation will be open.

**Course Grading:**

Letter grades for assignments will be as follows:

A = 100 - 94	D+ = 69-67
A- = 93 - 90	D = 66-64
B+ = 89 - 87	D- = 63-60
B = 86 - 84	F = 59 & below
B- = 83 - 80	
C+ = 79 - 77	
C = 76 - 74	
C- = 73 - 70	

See **Student Handbook** for additional information regarding Grading, Student Standing, and Academic Probation.

**Copyright Statement:**

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