

Course Syllabus
HSAD 5293: Managerial Epidemiology and Biostatistics
Fall 2023
MSU Texas
College of Health Sciences and Human Services
Department of Criminal Justice and Health Administration



Instructor: Robin Moreno

Email: D2L Email Only.

Please use the D2L email for all class-related inquiries. Please note that I typically respond within 24 hours, so please plan accordingly.

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Class Meets:

- HSAD 5293 X10 Online- Monday to Sunday at your convenience. This course is an online, asynchronous class conducted via D2L.

Course Overview:

This course will focus on the principles and practices of monitoring disease status and control related to health services management. It will emphasize the epidemiologist's methods, databases, and procedures as a basis for sound healthcare decision-making. It will examine the distribution and determination of diseases and injuries in human populations to achieve these ends. It will review the historical disease patterns, medical science, healthcare issues, biomedical statistics, and computer applications. Core management aspects will be emphasized as they relate to critically evaluating a community's and/or populations' health status. It will emphasize the epidemiologist's methods, databases, and procedures as a basis for sound decision-making in the healthcare industry.

Course Objectives:

At the completion of the course, the student will have completed the following course learning objectives:

1. Demonstrate an understanding of the organization and structure of healthcare organizations.
2. Have knowledge of different means of motivating professionals using the principles of various theories of motivation.
3. Demonstrate an understanding of leadership in health organizations, applying alternative frameworks for leadership.

4. Demonstrate knowledge of conflict resolution and negotiation as described in the books and additional readings.
5. Demonstrate an understanding of how to manage groups and teams.
6. Have knowledge of how to design various health services organizational subsystems.
7. Be able to integrate theoretical and applied content to analyze organizational situations.
8. Have knowledge of the basic principles of strategy and finance for healthcare organizations.

Required Textbooks and Materials:

Fleming, S. T. (2021). *Managerial Epidemiology – Cases and Concepts*. 4th Ed. ISBN 9781640551961

Hebel, J.R., & McCarter, R. (2012). *A Study Guide to Epidemiology and Biostatistics*. 7th Ed. Jones & Barlett.

Other Materials:

Supplemental readings and/or information may be made available at times during the course.

Instructional Methods:

Instructional strategies for this class will include assigned readings, participation in discussions, and written assignments, which will include independent research.

Course Assignments:

Weekly Modules: Modules specific to each course week are posted on D2L. Each module consists of the following measurable learning outcomes: assigned readings, written assignments, or a discussion question due. Please follow the instructions for assignment completion posted within each module. Each module must be completed by the due date specified in the tentative course schedule included in this syllabus.

Class Discussion: Some modules will have a discussion question posted by the instructor. The discussion question will be related to the assigned readings for that module. Students are required to read assigned materials and answer the discussion question. In order to obtain full points for the discussion post, students must post a response of their own and reply to at least one other thread on the discussion board. **Any response which is shorter than five sentences will receive partial credit only.** Discussion posts will be graded based on the quality of the content, length of the content, and compliance with APA7 guidelines for citations and references. **Students are encouraged to post both comments and questions and treat the discussion posts as discussions in the classroom.** This is a great platform to share your experiences and thoughts related to weekly topics.

Written Assignments: Some modules will include a written assignment. The assignment may include short questions, essay-type questions, and/or case studies. Questions and case studies will be based on the materials from the course. In total, there will be THREE writing assignments, and they are due on the date listed on the course schedule.

Final Exam: A written final exam will be conducted for this course. The final exam will include questions and case studies related to the course materials. More details on the final exam format will be provided later in the semester.

NOTE: THE FINAL EXAM IN THIS COURSE MUST BE PROCTORED WITH THE HELP OF RESPONDUS. DETAILED INSTRUCTIONS WILL BE EMAILED TO YOU BEFORE THE EXAM. THE TECHNICAL REQUIREMENTS INCLUDE A LAPTOP OR PC WITH WEBCAM.

IMPORTANT NOTE: Although you may complete your work early, no discussion posts, assignments, or exams will be accepted later than the due date. All assignments submitted after the due date will receive an automatic zero unless permission was given prior to the due date. Requests to turn work late must be submitted in writing at least ONE week prior to the submission due date. These requests will only be granted under extreme circumstances.

Course Assignment Style Guidelines:

For all written assignments and discussion board posts, students are expected to follow APA 7 formatting guidelines. **If you do not currently have an APA 7 style guide, please purchase or borrow from your classmate.** Please contact the instructor if you still have difficulty locating the style guide.

Grading:

Final Grades will be calculated with total points obtained in class. Weighting of assignments for purposes of grading will be as follows:

| Assignments | Grade Points |
|------------------------------|---------------------|
| Discussion Posts (10x11) | 110 Points |
| Written Assignment (3x30) | 90 Points |
| Final exam (1x100) | 100 Points |
| Total Possible Points | 300 Points |

Grade percentages (GP) will be calculated based on a student's accumulated points throughout the semester. The following point scale will be utilized for grading:

- 270-300 Points (90% or More) A
- 240-269 Points (80%-89.99%) B
- 210-239 Points (70%-79.99%) C
- 180-209 Points (60-69.99%) D

Students who accumulate below 209 points or 69% of GP will get an 'F.'

Note: It is important to know that obtaining a 'C' or lower grade in the course may impact your enrollment in the program.

Class Participation:

HSAD 5293x10: Since this is an online, asynchronous learning course, your discussion posts will be counted as your participation in the class. So, communicating through discussion posts is critical.

Academic Honesty:

The written work you turn in reflects your own ideas and your own words unless you specifically attribute them to another source. A very limited amount of quotation and paraphrasing for written assignments is acceptable. However, appropriate acknowledgment of the ideas, works, writings, or opinions that you borrow must be stated. **Since no assignments for this course require group work, any students who are found to be working together may lose some or all of the points for the assignments.**

Academic dishonesty is not acceptable and is a breach of the student code of ethics.

Dishonesty includes, but is not limited to:

- 1) Plagiarism
- 2) Submitting work that was not prepared by you (fraud)
- 3) Helping another student with their work when expressly prohibited (cheating).

If you need more information on student honor code, please visit [Student Conduct](#)

AI Statement

Since writing, analytical, and critical thinking skills are part of the learning outcomes of this course, all writing assignments should be prepared by the student. Developing strong competencies in this area will prepare you for a competitive workplace. Therefore, AI-generated submissions are not permitted and will be treated as plagiarism.

Please note that any breach of the student code of ethics could result in dismissal or a grade of 'F.'

Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil protections for persons with disabilities. Among other things, this legislation requires all students with disabilities to be guaranteed a learning environment that reasonably accommodates their disabilities. In accordance with state and federal law, MSU provides academic accommodations to students with documented disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Support Services (DSS) in Room 168 of the Clark Student Center (phone 940-397-4140). The instructor is under no obligation to offer accommodations for students with disabilities who are not registered with DSS. To learn more about DSS, you can also visit [Disability Support Services](#).

Campus Carry:

Senate Bill 11, passed by the 84th Texas Legislature, allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at [Campus Carry Rules](#).

Note: The contents of the syllabus are as accurate as possible. The instructor reserves the right to make any changes necessary to the syllabus and course material. Every effort will be made to inform students about the changes in the syllabus; however, it is the student's responsibility to know what changes have been made and complete the course requirements. There are no extra credit opportunities in this course.

Tentative Class Schedule Fall 2023, all due dates and times adhere to the Central Time Zone:

| Week | Topic and Readings | Module Assignment |
|--|---|--|
| Week 1 8/28-9/2 | INTRODUCTION | Complete Module 1 on D2L (due by 11:59 P.M. Sep. 2) Discussion 1 Due |
| Week 2 9/3-9/9 (Labor Day Holiday 9/4) | CHAPTER 1 (Fleming) An Introduction to Managerial Epidemiology CHAPTER 2 (Fleming) Infectious Disease Epidemiology | Complete Module 2 on D2L (due by 11:59 P.M. Sep. 9) Discussion 2 Due |
| Week 3 9/10-9/16 | CHAPTER 3 (Fleming) Measuring and Interpreting Morbidity CHAPTER 1 (Hebel & McCarter) Investigation of an Epidemic CHAPTER 2 (Hebel & McCarter) Measures of Mortality | Complete Module 3 on D2L (due by 11:59 P.M. Sep. 16) Discussion 3 Due |
| Week 4 9/17-9/23 | CHAPTER 3 (Hebel & McCarter) Incidence and Prevalence CHAPTER 4 (Hebel & McCarter) Measures of Risk | Complete Module 4 on D2L (due by 11:59 P.M. Sep. 23) Discussion 4 Due |
| Week 5 9/24-9/30 | CHAPTER 5 (Hebel & McCarter) Biological Variability CHAPTER 6 (Hebel & McCarter) Probability | Complete Module 5 on D2L (due by 11:59 P.M. Sep. 30) Writing Assignment 1 Due (no discussion this module) |

| Week | Topic and Readings | Assignment |
|--------------------|--|---|
| Week 6 10/1-10/7 | CHAPTER 7 (Fleming) Descriptive Epidemiology: Time, Place, and Person CHAPTER 7 (Hebel & McCarter) Screening | Complete Module 6 on D2L (due by 11:59 P.M. Oct. 7). Discussion 5 Due |
| Week 7 10/8-10/14 | CHAPTER 8 (Hebel & McCarter) Sampling CHAPTER 9 (Hebel & McCarter) Statistical Significance | Complete Module 7 on D2L (due by 11:59 P.M. Oct. 14). Discussion 6 Due |
| Week 8 10/16-10/21 | CHAPTER 10 (Fleming) Statistical Tools CHAPTER 10 (Hebel & McCarter) Correlation CHAPTER 11 (Hebel & McCarter) Multiple regression | Complete Module 8 on D2L (due by 11:59 P.M. Oct. 21) Discussion 7 Due |
| Week 9 10/22-10/28 | CHAPTER 11 (Fleming) Case-Control Studies CHAPTER 12 (Hebel & McCarter) Case-Control Studies | Complete Module 9 on D2L (due by 11:59 P.M. Oct. 28). Writing Assignment 2 Due |
| Week 10 10/29-11/4 | CHAPTER 12 (Fleming) Cohort Studies CHAPTER 13 (Fleming) Randomized Control Trials CHAPTER 13 (Hebel & McCarter) Cohort Studies CHAPTER 14 (Hebel & McCarter) Randomized Control Trials | Complete Module 10 on D2L (due by 11:59 P.M. Nov. 4). Discussion 8 Due |

| Week | Topic and Readings | Assignment |
|---|---|--|
| Week 11 11/5-11/11 | CHAPTER 15 (Hebel & McCarter) Survival Analysis CHAPTER 16 (Hebel & McCarter) Association and Causation | Complete Module 11 on D2L (due by 11:59 P.M. Nov. 11) Discussion 9 Due |
| Week 12 11/12-11/18 | CHAPTER 4 (Hebel & McCarter) Healthcare Planning and Needs Assessment CHAPTER 5 (Fleming) Quality of Care Measurement | Complete Module 12 on D2L (due by 11:59 P.M. Nov. 18) Discussion 10 Due |
| Week 13 11/19-11/25 Thanksgiving begins 11/21 | | No assignments due this week due to Thanksgiving Holiday |
| Week 14 11/26-12/2 Classes Resume 11/27 | CHAPTER 6 (Fleming) Morbidity and Risk Adjustment CHAPTER 8 (Fleming) Epidemiology and Financial Management CHAPTER 9 (Fleming) Cost-effectiveness Analysis CHAPTER 14 (Fleming) Clinical Epidemiology and Decision Making | Complete Module 13 on D2L Writing Assignment 3 Due Discussion 11 Due (due by 11:59 P.M. Dec. 2) |
| Week 15 12/3-12/9 | 12/8 Last Day of Class 12/9 FINAL EXAMS BEGIN | THE FINAL EXAM WILL OPEN AT 8:00 A.M. ON DEC. 9 AND CLOSE 8:00 P.M. ON DEC. 11. |

- * Please note that the above schedule does not contain the supplemental readings and materials list. Please refer to the modules in D2L.
- * Holidays may be found on the Academic Calendar on the MSU Texas website.