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Fall 2014

### PUBH 3231 - Epidemiology and Biostatistics

John Sheahan

*Georgia Southern University, Jiann-Ping Hsu College of Public Health*

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**Georgia Southern University**  
**Jiann-Ping Hsu College of Public Health**  
***PUBH 3231 – Epidemiology and Biostatistics (CRN 89156)***  
Fall 2014

<b><u>Instructor:</u></b>	<b>John Sheahan MPH</b>
<b><u>Office:</u></b>	Jiann-Ping Hsu Public Health Building Room # 1027
<b><u>E-Mail Address:</u></b>	<a href="mailto:js02904@georgiasouthern.edu">js02904@georgiasouthern.edu</a>
<b><u>Office Hours:</u></b>	Tuesday/Thursday 3.15 pm-5.30 pm or by appointment
<b><u>Class Meets:</u></b>	Tuesday/Thursday 2.00 pm-3.15 pm - Education Building 1130

**Prerequisites:** HLTH 2130 or Permission of Instructor

**Catalog Description:** This course introduces the student to the principles and practice of epidemiology and vital statistics. Students will be exposed to the historical development of epidemiology, concepts of causality, definitions of health and disease, and sources of community health data. Current principles and practices in the cause, prevention and control of diseases in various community settings will be emphasized. 3 credits (3-0-3).

**Required Textbooks:**

Merrill (2010). Introduction to Epidemiology (5<sup>th</sup> Edition). Jones and Bartlett Publishers: Sudbury, MA. ISBN 0763766224 – DO NOT BUY THE 6<sup>th</sup> Edition (not the book with the green cover!!)

Kittleson, M. (2013). Vital Statistics for the Public Health Educator (3rd Edition). HEDIR Publishing. To order this CD - you MUST go to [www.hedir.org/publishing](http://www.hedir.org/publishing). You can download the CD for \$25.00. If you have trouble ordering this e-book, please respectfully contact Dr. Mark Kittleson at [kittle@nmsu.edu](mailto:kittle@nmsu.edu).

Preston, R. (1997). The Cobra Event. New York: Random House. ISBN 0-679-45714-3. I have 30 copies that I can loan out to students. Please send me an email to reserve a copy. First come, first serve.

**Additional Required Resources:**

Non-Programmable Calculator, preferably up to 10 digits

**Course Learning Objectives:**

1. The student will be able to identify the basic concepts and principles of epidemiology and vital statistics.
2. The student will be able to apply epidemiological concepts to diverse health problems and in various health settings.
3. The student will be able to understand the basic components of collecting, organizing, interpreting, and summarizing vital statistics.
4. The student will be able to operate within the information superhighway in order to obtain and utilize current epidemiological health data.

- The student will be able to review disease and epidemiological cases in order to solve current, relevant epidemiological case study problems.

**Instructional Methods:**

Information will be presented in the classroom, through the required readings, and through written & oral assignments. Class meetings will be a combination of lecture, class discussion, and group activities. The instructor will attempt to cover all of the assigned readings; however, failure to cover assigned readings does not alleviate the student’s responsibility of knowing the material. Furthermore, students are responsible for all miscellaneous information discussed during the assigned class periods. If you miss a class, you are responsible to find a fellow classmate to get all notes and materials missed.

<b><u>Grading:</u></b>	<i>Assignments</i>	<i>Points</i>
	Exams (3) @ 100 points each	300
	Final Exam	100
	Quizzes 5@10 pts each	50
	<u>Cobra Event Quizzes 5@ 10 pts each</u>	50
	Outbreak Investigation 1@ 50 points	<u>50</u>
Total		550

<i>Point Scale</i>	<i>Percent</i>	<i>Grade</i>
495 - 550 pts	90 - 100%	A
440 - 494 pts	80 - 89%	B
385 - 439 pts	70 - 79%	C
330 - 384 pts	60 - 69%	D
329 - 0 pts	00 - 59%	F

**Assignments:**

- Exams: There will be three exams, each worth 100 points. Exams may be any combination of true/false, multiple choice, matching, short answer, calculations & discussion. You are required to have a scan form 29240 (the burgundy one) and nonprogrammable calculator for each test (300 pts total).
- Final Exam. This exam is non-comprehensive test and may be any combination of true/false, multiple choice, matching, short answer, & discussion. You are required to have a scan form form 885 and nonprogrammable calculator for this test. No early/late finals will be given. If this time conflicts with your schedule, please consider dropping this course. (100 points total).
- Quizzes. 5 quizzes will be given over the course of the semester. These quizzes will account for 10 points each (50 total points).
- Cobra Event Quizzes. Throughout the semester, we will read a book entitled The Cobra Event. If you have reserved a book with me, please do not write, mark or highlight on your borrowed copy. Each student will sign out their reserved copy and are expected to return the copy on the day of the last quiz.

Five quizzes will be given on this book. Each quiz will consist of ten questions, with one point given for each correct response. (50 points total).

5. Outbreak Investigation- One scientific article will be given to you over the semester. I expect you to be able to properly evaluate, identify, and explain the processes of a scientific epidemiological outbreak investigation. You will be given a potential scenario and then asked a series of questions as to how you as an investigator will proceed with your research. Guidelines will be distributed separately. The outbreak investigation due date is announced in this syllabus. (50 total points).
6. Attendance. Once in the class, please remain in the class. Please be on time so as not to cause a disturbance to the class. Attendance will be taken but is not mandatory; however, attendance is highly encouraged. **You are responsible** for missed content, announcements, due dates, homework assignments, date changes, etc when you miss a class. Please contact a fellow student who was in attendance that day.

### **Course Policies:**

1. There will be no make-up exams given. Exams are the property of the professor, any exams removed from the classroom by students will result in the score of a "0" be assigned for that exam, and an "F" for the entire course. Exams require a Scantron Form 29240. All exams are multiple choice, true/false, fill-in-the-blank, matching and essays.
2. No make up tests are given except for **an university excused absence with full documentation**. If you miss a test, you have one week to make the exam up. All make-up exams will be a combination of essay questions and computations. If it is not made up **within one week**, you will receive 0 points for the exam. **You have 24 hours** after a test is taken by the class to contact me via email to schedule your make-up exam or a 0 will be assigned to the test.
3. The final exam is mandatory (non-cumulative) and will be given during finals week. Early final exams will not be given. If this scheduled time is a problem, please consider dropping this course.
4. **All assignments** must be typed.
5. All assignments must be given to the professor directly or submitted online, unless otherwise directed. Assignments should not be given to the Office secretary, left in my mailbox, etc.
6. Late work assignments are not accepted. Please submit all assignments as you walk into the class. Assignments are due the first two minutes of class, after that they are considered late and will not be accepted. For assignments due on Folio, they are due according to the times posted on Folio. I will **ONLY** accept assignments submitted in .doc or .docx or .pdf formats. Any other type of submissions will not be opened and receive automatic "0" points. I do not accept assignments submitted via email. I will not open assignments submitted via email and they will receive an automatic "0" points. For the outbreak investigation I require that this be handed in the day of the class it is due. I will require a physical and electronic copy of your article critique.

7. Please consult the STUDENT CONDUCT CODE 2013-14 for course policy concerning issues related to academic dishonesty. Anyone caught violating any of these regulations will be immediately reported to GSU's Judicial Board, and be assigned an "F" for the course.
8. Students who stop attending class without officially withdrawing from the class will receive a final grade of "F".
9. Samples of your work may or may not be reproduced for research purposes and/or inclusion in the professor's teaching portfolio. You have a right to review anything selected for use, and subsequently ask for its removal.
10. The Education Building follows a no eating/no drinking" policy in all its classrooms. Please follow this policy. If you need to eat in class, please bring enough to share!
11. If you are receiving services from the Student Disability Resource Center (SDRC) please come and see me, as soon as possible, to schedule an appointment to present me with an accommodation letter.
12. This course is on Folio. Please regularly check Folio for any messages that I might have for you.
13. I expect you to take notes in this class. Some topics I lecture about will not be in the textbook. **You are responsible** for any material I lecture about in class.
14. Students are expected to have a calculator during all class periods. The instructor will not provide calculators during class or exam periods. **Sharing calculators is not permitted during an exam.**
15. Student seating will be randomized during testing periods.
16. During testing periods, students are only allowed to bring a pencil/pen, scantron, and non-programmable calculator to the seating area. Book bags and cell phones (turned off) must be left in the front of the classroom.
17. If you need to contact me, please use the js02904@georgiasouthern.edu email address rather than the email message services on Folio. Please give me 48 hours to respond to emails. To write a **professional** email, please include the following: a salutation, identify who you are, what the contact is in reference to (i.e. HLTH 3231), and what you would like me to do. At the bottom of the email, please type out your name. Please be careful of nick names that you have associated with the person because they might show up that way!
18. Cell phone policy: Cell phones are expected to be OFF (or on silent) and OFF your person (in your purse or bookbag) at all times during all classes. If your cell phone goes off during class you are disturbing myself and the rest of the students. **Please show courtesy!**
19. I also reserve the right to change due dates and on quizzes, tests, and article critiques as necessity dictates. I will however try to follow this syllabus as closely as possible.

20. The last day to withdraw from the class without penalty is March 09,2015

**My Commitment to You:**

As a student in my class, you are important to me. I am committed to your continued learning and college experience. You are never an interruption of my work. You are the purpose of it. Students are the most important people at Georgia Southern University. I am honored that you entrust your education to me. Please feel free to visit my office or e-mail me at anytime.

HLTH 3231: Epidemiology & Biostatistics  
Fall 2014

<b>Date</b>	<b>Topic Assignment</b>	<b>Chapter Readings</b>
Week One 01/13 & 01/15	Course Introduction	Chapter 1 Merrill
Week Two 01/20&01/22	<p style="color: green;">Tuesday Quiz #1</p> <p>Historic Developments in Epidemiology</p>	Chapter 2 Merrill
Week Three 01/27 & 01/29	<p>Cobra Event Quiz #1</p> <p>Understanding Basic Statistics</p>	Chapters 1,2,3 Kittleson
Week Four 02/03 & 02/05	<p>Ratio, Proportion, Percentage &amp; Rate Rate</p> <p style="color: blue;">Quiz #2</p>	Chapters 4,5 Kittlson
Week Five 02/10 & 02/12	<p style="color: red;"><b>Exam #1 (2/12) Thursday: Chapters 1,2,4,5,7,8: Kittleson and Chapters 1-2, Merrill</b></p>	Chapters 7,8 Kittleson
Week Six 02/17 & 02/19	<p style="color: green;">Cobra Event Quiz #2</p> <p>Practical Concepts in Epidemiology</p>	Chapter 3

Week Seven 02/24 & 02/26	Design Strategies and Statistical Methods in Descriptive Epidemiology  <b>Quiz #3</b>	Chapter 4
Week Eight 03/03 & 03/05	<b>Cobra Event Quiz #3</b> Descriptive Epidemiology According to Person, Place and Time	Chapter 5
Week Nine 03/10 & 03/12	<b>Exam #2 (03/10) Tuesday: Chapters 3 – 5</b>  General Health and Population Indicators	Chapter 6
Week Ten 03/24 & 03/26	Design Strategies and Statistical Methods in Analytical Epidemiology  Cobra Event Quiz #4	Chapter 7
Week Eleven 03/31 & 04/02	Experimental Studies in Epidemiology <b>Quiz # 4</b>	Chapter 8
Week Twelve 04/07 & 04/09	Causal Inference  <b>Exam #3 (04/09) Thursday: Chapters 6-9</b>	Chapter 9
Week Thirteen 04/14 & 04/16	Field Epidemiology  <b>Outbreak Investigation : Thursday (04/16)</b>	Chapter10
Week Fourteen 04/21 & 04/23	Chronic Disease Epidemiology  <b>Quiz #5 (11/18) Tuesday: Chapter 11</b>	Chapter 11



Week Fifteen 04/28 & 04/30	Clinical Epidemiology Cobra Event Quiz #5  Semester Wrap-Up	Chapter 12
Final Week	<b>Final Exam To Be Announced</b>	

\*This syllabus, including the calendar, is subject to modification if time constraints, student needs, or instructor needs warrant changes. It is your responsibility to remain apprised of any changes to the syllabus and to successfully complete the requirements of this course.

