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Fall 2017

## EPID 9231 - Epidemiology of Chronic Disease

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**Georgia Southern University**  
**Jiann-Ping Hsu College of Public Health**  
EPID 9231 – Epidemiology of Chronic Disease

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<b><u>E-Mail Address:</u></b>	Jianzhang@geogriasouthern.edu ( <a href="#">the best way to reach me</a> )
<b><u>Office Hours:</u></b>	Monday 3:00 PM - 5:00 PM Tuesday 1:00 PM - 4:00 PM Consultation appointments are available on an as-needed basis.
<b><u>Web Page:</u></b>	Folio
<b><u>Class Meets:</u></b>	Monday, 6:00 pm – 8:45 pm (Info Technology Bldg 2201)

**Prerequisites:** PUBH 6533 or equivalent or permission of the instructor

**Catalog Description:**

This course is designed to introduce the student to the ever-expanding area of chronic disease epidemiology. Students will be introduced to the current status of chronic disease and control programs, methods used in chronic disease surveillance, intervention methods, and modifiable risk factors. Some of the major chronic diseases such as cancer, cardiovascular disease, chronic lung disease, diabetes and arthritis will be discussed in detail. Pathophysiology and clinical features of common chronic conditions will also be presented.

**Textbook:**

No required textbook, however, the book listed below is recommended for the reference for this class.

*Chronic Disease Epidemiology and Control.* Washington, DC: American Public Health Association Brownson RC, Remington PL, Davis JR. (2010, 3<sup>rd</sup> edition). .

Supplemental reading materials, chapters from other books or publications appearing in major journals, will be provided by the instructor and accessible online at the course website or distributed during class.

**Program Goals:**

Upon graduating, a student with DrPH in Epidemiology should be able to:

1. Demonstrate their readiness to work with communities to address public health problems.
2. Select and apply theoretically based interventions to address public health problems.
3. Apply appropriate research methods to address community health problems, particularly among rural and underserved populations.

1. Construct a public health and epidemiological research question from ideas, conditions, and events that exist in a rural and urban community, region, state, and nation using critical thinking skills.
2. Demonstrate required skills for translating public health practice objectives to the appropriate epidemiological framework for analysis and interpretation of results.
3. Select appropriate statistical tools, methodological alternatives, and graphical descriptives to analyze and summarize public health and epidemiological data.
4. Formulate population-based hypotheses and develop appropriate research designs to test these hypotheses.
5. Communicate epidemiological principles and concepts to lay and professional audiences through both oral and written communication.

**Course Objectives:**

Upon completion of this course, the student will be able to:

1. Identify relevant data and information sources on chronic disease outcomes within and outside public health systems.
2. Determine threshold values (e.g., baseline disease burden, prevalence of risk behaviors) for public health action.
3. Describe basic pathophysiologic and psychopathologic mechanisms related to risk factors and chronic diseases.
4. Demonstrate use of etiologic principles into the development of chronic disease prevention and control strategies.
5. Explain the role and influence of socio-behavioral factors (including community, political, social, family, and individual behavioral factors) in chronic disease risk.
6. Access routinely collected data on chronic disease outcomes for analysis.
7. Create an analysis plan for use of epidemiologic data from investigations, studies, or surveillance.
8. Calculate necessary standard epidemiologic measures and measures of association (e.g., incidence, prevalence, attributable risk, odds ratio).
9. Synthesize information from a variety of epidemiologic studies using meta-analysis methodology.
10. Evaluate the strengths and limitations of epidemiologic reports and articles within in the scope of chronic disease epidemiology
11. Design methodologically sound epidemiologic studies of chronic disease;
12. Identify the roles and capabilities of public health laboratories and other laboratories and how they are used in epidemiologic investigations.
13. Interpret laboratory data related to chronic disease, accounting for factors that influence the results of screening and diagnostic tests.
14. Identify audience, methods, and content for communication of epidemiologic findings.
15. Develop content for risk communication messages in collaboration with other public health professionals.
16. Review risk communication messages for scientific accuracy and clarity.
17. Demonstrate use of scientific evidence in preparing recommendations for action or interventions

### **Overview of the content to be covered**

Week	Topic	Readings	Assignment
1 08/14	Introduction Self-introduction & course introduction Self-assessment quiz (not for grading)	Zhang J et al Am J Public Health. 2012 Dec;102(12):e14-6	
2 08/21	Similarities and differences between United and China in term of the epidemiology of chronic diseases	Michael E. Lessons Learned from Public Health Efforts and Their Relevance to Preventing Childhood Obesity.	
3 08/28	Foundation of chronic disease control and prevention – From evolution to revolution	Gusmano MK, Int J Health Policy Manag. 2014 Dec 27;4(1):7-12	
4 09/04	Holiday – No class meeting		
5 09/11	Art of chronic disease research Validity – unique challenge to chronic disease research		Due of topic review
6 09/18	Principle and practice of using off-shelf source to chronic disease research	Prog Neuropsychopharmacol Biol Psychiatry. 2007 Oct 1;31(7):1429-35]	
7 09/25		<ul style="list-style-type: none"> <li>Robinson E, Pediatrics 2016; 137(5):e20153957.</li> <li>Ozmen D et al., BMC Public Health 2007, 7:80</li> </ul>	
8 10/02	External vs internal validity Correlation vs association Categorical vs. continuous p-value vs. effect size	<ul style="list-style-type: none"> <li>Ubani CC Psychiatry Res. 2015;228(3):866-70.</li> <li>Politis MD, Obes Res Clin Pract. 2016 10(4):399-407</li> </ul>	
9 10/09	Moderate vs mediator -	Ogechi I, et al High Blood Press, Cardiovasc Prev. 2016 Sep;23(3):245-53	
10 10/16	Cohort study	<ul style="list-style-type: none"> <li>Hansen AR, Pediatrics. 2014 Sep;134(3):481-8.</li> <li>Snook KR, JAMA. 2017 Mar 7;317(9):971-973.</li> </ul>	
11 10/23	Multiple cross-sectional study		
12 10/30	Class project review / presentation		Due of the original research paper
13 11/06	Post publication issues of chronic disease research		Final exam Q is distributed
14 11/13	Quantile regression		
No class 11/20		Break	
15 11/27	Exam /project review Course evaluation		Due of the final exam essay

Samples of your work may be reproduced for search purposes and/or inclusion in the professor's teaching portfolio. You have the right to review anything selected for use, and subsequently ask for its removal.

**Instructional Methods:** Class meetings will be a combination of lecture and class discussion.

### **Assignments:**

As a part of doctoral program for a professional degree (DrPH), this course is designed to teach students the strategic overview of chronic disease control and prevention and advanced research and

communication skills for chronic disease control and prevention practices. Therefore, the assignments are more than text-book based multiple choice, calculations or anything you common see in introduction of epidemiology or intermediate research method classes. Instead, personalized class assignment and group projects are designed to create an active learning environment for a review of the main issues of chronic disease epidemiology. Students will have an opportunity to complete a group assignment to review the population burden of the selected chronic diseases based on his or her interest and professional goal. The methods used in public health-oriented intervention will also be covered by the review assignment.

**Exam Schedule and  
Final Examination:**

Final Examination: November 27, 2017

**Grading:**

Weighting of assignments for purposes of grading will be as follows:

Review of the topic selected .....	40 points
Original research assignment .....	40 points
Final Exam Essay .....	20 points
Class attendance, and Discussion participation .....	10 points

**Total Possible Points** **100 points**

Your grade will be reflected by the following scale:

90 – 100	A	80 – 89	B
70 – 79	C	60 – 69	D
Below 60	F		

Your grades **will not** be posted. All exams and assignments will be graded and returned promptly so that students may accurately calculate their grades at any point in time during the semester.

All your work needs to be produced in a professional manner. The typos, grammar errors should be kept at minimum if any. The format and readability of your submissions will be taken into consideration when the instructor grades. At the present time, only MS word files are acceptable.

All assignments should be received by 6:00PM of the due day by electronic submission to [jianzhang@georgiasouthern.edu](mailto:jianzhang@georgiasouthern.edu). You must receive a confirmation of receipt to assume these have been well

received by instructor for the final grade. You are responsible for these submissions and if the files are not received in a readable format, hard-copies are due at the same time in my mailbox located in the 2<sup>nd</sup> floor of Western wing, Hendricks Hall. So attempt early submission.

There are times when extraordinary circumstances occur (e.g., serious illness, death in the family, etc.). In such circumstances, and/or if you need additional time to satisfactorily complete any course requirement, please consult with the instructor within a reasonable amount of time.

**\*\*\* *Technological difficulties do NOT constitute legitimate excuses or emergencies* \*\*\***

*Nota Bene:* Extensions are not guaranteed and will be granted solely at the discretion of the instructor.

NO EXTRA CREDIT PROJECTS WILL BE ASSIGNED!

**Academic Misconduct:** As a student registered at this University, it is expected that you will adhere to only the strictest standards of conduct. It is recommended that you review the latest edition of the *Student Conduct Code* book, as well as the latest *Undergraduate & Graduate Catalog* to familiarize yourself with the University's policies in this regard. Your continued enrollment in this course is an implied contract between you and the instructor on this issue. From this point forward, it is assumed that you will conduct yourself appropriately.

Academic integrity relates to the appropriate use of intellectual property. The syllabus, lecture notes, and all materials presented and/or distributed during this course are protected by copyright law. Students are authorized to take notes in class, but that authorization extends only to making one set of notes for personal (and no other) use. As such, students are not authorized to sell, license, commercially publish, distribute, transmit, display, or record notes in or from class without the express written permission of the instructor.

### **University's policy against Plagiarism**

"According to the Academic Dishonesty Policy of GSU, Plagiarism includes (but is not limited to):

- A. Directly quoting the words of others without using quotation marks or indented format to identify them.
- B. Using published or unpublished sources of information without identifying them.
- C. Paraphrasing material or ideas without identifying the source.
- D. Unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic material.

If you are accused of plagiarism by a JPHCOPH, the following policy, as per the Judicial Affairs website ( <http://students.georgiasouthern.edu/judicial/faculty.htm> ) will be enforced:

## PROCEDURES FOR ADJUDICATING ACADEMIC DISHONESTY CASES

### First Offense - In Violation Plea

1. If the professor and the Dean of Students agree that the evidence is sufficient to warrant a charge of academic dishonesty, the professor should contact the Office of Judicial Affairs to determine if this is a first violation of academic dishonesty. The incident will be reported via the following website: <http://students.georgiasouthern.edu/judicial/faculty.htm>
2. If it is a first violation, the professor should talk with the student about the violation. If the student accepts responsibility in writing and the professor decides to adjudicate the case, the following procedures will be followed:
  - a. The student will be placed on disciplinary probation for a minimum of one semester by the Office of Judicial Affairs.
  - b. The student will be subject to any academic sanctions imposed by the professor (from receiving a 0 on the assignment to receiving a failing grade in the class).
  - c. A copy of all the material involved in the case (Academic Dishonesty Report Form and the Request For Instructor to Adjudicate Form) and a brief statement from the professor concerning the facts of the case and the course syllabus should be mailed to the Office of Judicial Affairs for inclusion in the student's discipline record.

### First Offense - Not In Violation Plea (student does not admit the violation)

- If the professor and the Dean of Students agree that the evidence is sufficient to warrant a charge of academic dishonesty, the professor should contact the Office of Judicial Affairs to determine if this is the first or second violation of academic dishonesty. The student will be charged with academic dishonesty and the University Judicial Board or a University Hearing Officer would hear the case. If the student is found responsible, the following penalty will normally be imposed:
- a. The student will be placed on Disciplinary Probation for a minimum of one semester by the Office of Judicial Affairs.
  - b. The student will be subject to any academic sanctions imposed by

the professor.

#### Second Violation of Academic Dishonesty

If the professor and the Dean of Students agree that the evidence is sufficient to warrant a charge of academic dishonesty, and if it is determined this is the second violation, the student will be charged with academic dishonesty and the University Judicial Board or a University Hearing Officer would hear the case. If the student is found responsible, the following penalty will normally be imposed:

- a. Suspension for a minimum of one semester or expulsion.
- b. The student will be subject to any academic sanctions imposed by the professor.

#### NOT RESPONSIBLE FINDING

When a student is found not responsible of academic dishonesty, the work in question (assignment, paper, test, etc.) would be forwarded to the Department Chair. It is the responsibility of the Department Chair to ensure that the work is evaluated by a faculty member other than the individual who brought the charge and, if necessary, submit a final grade to the Registrar. For the protection of the faculty member and the student, the work in question should not be referred back to the faculty member who charged the student with academic dishonesty. In the case of a Department Chair bringing charges against a student, an administrator at the Dean's level will ensure that the student's work is evaluated in an appropriate manner.

#### **Academic Handbook:**

Students are expected to abide by the Academic Handbook, located at <http://students.georgiasouthern.edu/sta/guide/>. Your failure to comply with any part of this Handbook may be a violation and thus, you may receive an F in the course and/or be referred for disciplinary action.

#### **University Calendar for the Semester:**

The University Calendar is located with the semester schedule, and can be found at: <http://www.collegesource.org/displayinfo/catalink.asp>.

#### **Class Attendance and Participation Policy:**

Federal regulations require attendance be verified prior to distribution of financial aid allotments. Attendance will not be recorded after this initial period. The level and quality of participation by each student during lectures, group activities and discussions will be taken into consideration when calculating final grades. This means points may be awarded or deducted depending on the quality of your participation throughout the term.

Please come to class on time and be prepared to stay until the end of

class. Cell phones should not be used in class. Please set them to “vibrate” in case of emergency or if you have an urgent personal or professional reason for expecting a call. **IF YOU HAVE TO CHECK YOUR CELL PHONE, PLEASE DO SO IN THE HALLWAY OUTSIDE OF THE CLASS ROOM.** “Side” conversations among students are not acceptable unless your conversation is a course-related one.

**One Final Note:**

The contents of this syllabus are as complete and accurate as possible. The instructor reserves the right to make any changes necessary to the syllabus and course material. The instructor will make every effort to inform students of changes as they occur. It is the responsibility of the student to know what changes have been made in order to successfully complete the requirements of the course.