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Spring 2015

PUBH 6533 - Epidemiology

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Georgia Southern University
Jiann-Ping Hsu College of Public Health

PUBH 6533– Epidemiology
Spring 2015

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<u>Phone:</u>	(912) 478-7902 (best to contact me by email)
<u>E-Mail Address:</u>	ksullivan@georgiasouthern.edu (to set up an appointment)
<u>Office Hours:</u>	Tuesday and Thursday 12:30 PM – 3:00PM and by appointment

Course Catalog available at: http://students.georgiasouthern.edu/registrar/pdf/catalogs/GraduateCatalog/index.htm under Jiann-Ping Hsu College of Public Health Programs

Prerequisites: N/A

FOLIO address: <http://my.georgiasouthern.edu>

Catalog Description

This course provides an introduction to many important topics in epidemiology for public health practice, including but not limited to the evolution of the discipline, causal concepts in the natural history of disease, critical features of infectious and chronic diseases, elements of public health screening, basic measures used in epidemiology, design of epidemiologic investigations, consideration of random error and systematic bias, calculation and interpretation of confidence intervals and p values, discussion of confounding and interaction, criteria for evaluation of cause and effect relationships and the implications for ethical public health practice. Students are expected to gain a foundation in epidemiologic methods for exploration of the causes and conditions that influence the origin, propagation, mitigation, and prevention of diseases that impact population health.

Required Textbook:

Friis RH and Sellers TA. *Epidemiology for Public Health Practice (5th Ed.)* Boston, MA: Jones and Bartlett Publishers. (ISBN: 978-1-4496-1361-7).

Response times:

During a normal work week (i.e., Monday 9:00 AM through Friday 5:00 PM) students can expect responses as follows:

- Email: within 48 hours
- Discussion posts: within 72 hours
- Assignment grades: within 72 hours of submission date.

Exceptions: I do not check FOLIO or GSU email over the weekends. If you send me an email after 5:00 PM on Friday, please do not expect a response until the following Monday.

MPH Core Student Learning Outcomes (CORE)

1. Demonstrate proficiency and effectiveness in the communication of core public health principles and practices, both oral and written.
2. Demonstrate proficiency in the integration of the core public health disciplines (Biostatistics, Epidemiology, Environmental Health, Health Policy/Management, and Social/Behavioral Science) in practice and research.
3. Demonstrate proficiency in problem solving, critical thinking, and public health leadership.

MPH Epidemiology Student Learning Outcomes (EPID)

1. Formulate population-based hypotheses and develop appropriate research designs to test these hypotheses.
2. Collect, analyze, and interpret data derived from population-based research.
3. Create and implement public health surveillance systems for population-based studies.
4. Recommend evidence-based interventions and control measures in response to epidemiologic findings.
5. Communicate epidemiologic principles and concepts to lay and professional audiences through both oral and written communication.

MPH Core Competencies in Epidemiology

Upon graduation, a student with an MPH degree should be able to:

1. Describe a public health problem in terms of magnitude, person, and time in rural and urban settings.
2. Analyze data from epidemiologic investigations, studies, and surveillance, with special emphasis on the identification of health disparities and promotion of health equity.
3. Apply principles of causation to make judgments about causal inference from epidemiologic data.
4. Apply the principles and limitations of public health screening programs.
5. Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues.
6. Apply basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.
7. Explain the basic terminology and definitions of epidemiology.
8. Identify the role of laboratory resources in epidemiologic activities.
9. Explain how determinants of health affect public health practice.
10. Communicate epidemiologic information to lay and professional audiences.
11. Identify the strengths and limitations of epidemiologic research findings.
12. Explain the different uses of basic study designs and selection of variables used in public health.

Performance-Based Objectives Linked to Course Activities (Note: Activities Described in Next Section)

1. Students will demonstrate competence in the basic terminology associated with epidemiology. (Activity 1)
2. Students will demonstrate competence in the ability to calculate and interpret basic epidemiologic measures including, but not limited to incidence, prevalence, risk ratios, sensitivity/specificity, and predictive values. (Activity 2)
3. Students will demonstrate the ability to integrate basic concepts of epidemiology. (Activity 3)
4. Students will demonstrate the ability to communicate epidemiologic concepts through writing to lay audiences. (Activity 4)
5. Students will demonstrate the ability to communicate epidemiologic concepts through writing to professional audiences. (Activity 5)
6. Students will demonstrate the ability to communicate epidemiologic concepts through presentation to lay and professional audiences. (Activity 6)

Assessment of Student Learning

Activity 1: Use course lectures and class discussions to explain the basic terminology and definitions of epidemiology, including, but not limited to, prevalence, incidence, mortality rates, risk difference, etiologic/attribution risk fraction/percent, population etiologic/attribution risk fraction/percent, sensitivity, specificity, predictive values, percent agreement, kappa statistic, odds ratios, relative risk, confidence interval, bias, and confounding. Competence in basic terminology will be evaluated using two activities: (1) 5 minute weekly quizzes (2) three equally weighted exams.

Activity 2: Use course lectures, class discussions and class exercises to illustrate calculation and interpretation of basic epidemiologic measures including, but not limited to incidence, prevalence, risk ratios, sensitivity, specificity, and predictive values. Competence in the ability to calculate and interpret basic epidemiologic measures evaluated using two activities: (1) 5 minute weekly quizzes (2) three equally weighted exams.

Activity 3: Use course lectures, class discussions, and case studies to explain the basic application of epidemiologic principles, as well as the integration of these principles across the public health spectrum. Competence in the ability to integrate concepts will be evaluated using a critique of a journal article at the end of the semester.

Activity 4: Competence in written communication to the lay audience will be evaluated using brief writing assignments (FOLIO discussions) that focus on current disease trends.

Activity 5: Competence in written communication to the professional audience will be evaluated using a written critique of a journal article.

Activity 6: Competence in oral presentation will be evaluated using the Preparation and delivery of a PowerPoint presentation of a critique of a journal article.

Course Structure

This course will use a combination of in-class sessions combined with FOLIO online learning modules to help you during the learning process and evaluate your progress. There is also a detailed explanation of the tools in Folio located in the *Course Structure* link in the *Course Orientation - Start Here* area of this course. Tutorials for Folio are located on your Folio main page, and there is a help link located in the upper right-hand corner of the Folio course. If you are having particular issues with FOLIO we can address them before or after class.

Online Learning Component

Students must be motivated and responsible for keeping up with understanding what is expected and stay on task with due dates for quizzes, assignments, and other activities. You need to log into the course on a daily basis to check for messages and other important information. Do NOT wait until the last minute to do work that requires you to submit by a due date. Please know, too, that Folio goes down for maintenance on a regular basis; you'll find that information--Folio Maintenance Schedule--on the Folio home page where your courses are listed.

Netiquette

Because online communication generally lacks visual cues common to face-to-face interactions, you are expected to follow these standards. Netiquette is a combination of Network Etiquette. Please abide by the following netiquette rules when communicating with your instructor and peers in this class.

- Be sensitive and reflective to what others are saying.
- Don't use all caps. It is the equivalent of screaming.
- Don't flame - These are outbursts of extreme emotion or opinion.
- Think before you hit the post (enter/reply) button. You can't take it back!
- Don't use offensive language.
- Use clear subject lines.
- Don't use abbreviations or acronyms unless the entire class knows them.
- Be forgiving. Anyone can make a mistake.
- Keep the dialog collegial and professional.

Exam Format, Guidelines and Schedule

There will be three exams given of equal weight. All exams will be in class. These tests will be approximately one hour in length. The final will be given during exam week and will be approximately one and one-half hour in length.

Assignments/Evaluations

Three Examinations: 60% of Final Grade)

Exams may be any combination of true/false, multiple choice, matching, short answer, & discussion. Make-up exams will not be administered unless the absence is deemed excused. The validity of excused absences will be determined by the instructor and will be individually assessed (Activities 1 & 2).

Homework Assignments: 10% of Final Grade

Homework assignments will be given to reinforce concepts learned in class. **Important: save your homework assignments in this format:** Assignment 1_ your-first-name_ your-last-name.docx

All homework assignments are due by 11:59 PM on the due date shown on the course schedule and calendar.

Quizzes: 10% of Final Grade

Quizzes on the reading assignments will be administered each week to assess overall preparation in terms of material covered previously. The quizzes are designed to facilitate exam preparation and hold the student accountable for assigned reading. While points per quiz are minimal, inadequate preparation will have an adverse impact on student grades. They will be completed in FOLIO on the dates shown in the course schedule and calendar. Make up quizzes will not be given unless the absence is deemed excused. The validity of excused absences will be determined by the instructor and will be individually assessed (Activities 1 & 2).

Article Critique and PowerPoint Presentation: 15% of Final Grade

Please select a journal article on a topic of interest, published within the past 8 years, from a public health, epidemiology, or medical journal. The article must be submitted to me in the designated FOLIO discussion area and approved by me. Each journal article will be posted on FOLIO so other members may read it and comment in the student discussion forum if desired. Using the “Appendix A – Guide to the Critical Appraisal of an Epidemiologic/Public Health Research Article” in the required textbook, you will write a paper critiquing the article. The paper should be 5-7 pages (exclusive of title page, abstract, references, etc.), double-spaced, 12-pt font, 1-inch margins and prepared in APA or AMA style (Activities 5 & 6).

You should also prepare a 10-minute PowerPoint presentation describing your article, the research involved, the findings and your evaluation of the article and the research. This will be presented in class.

Discussion activities: 5% of Final Grade You are expected to participate in weekly discussions and to make posts before Thursday at 11:59 PM. Should you fail to post or miss a deadline, you will receive a 0 for that week’s discussion. A holistic rubric for discussion posts is provided (Activity 4).

Grading

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

Exam 1.....	20%
Exam 2	20%
Final Exam	20%

Homework Assignments	10%
Quizzes	10%
Article Critique and PowerPoint Presentation.....	15%
Discussion activities.....	5%

The following scale will be utilized in grading:

89.5% - 100%	A
79.5% - 89.4%	B
69.5% - 79.4%	C
59.5% - 69.4%	D
< 59.4%	F

All exams and assignments will be graded and returned promptly so that students may accurately calculate their grades at any point during the semester.

There are times when extraordinary circumstances occur (e.g., serious illness, death in the family, etc.). In such circumstances, please consult with the instructor within a reasonable amount of time. Extensions are not guaranteed and will be granted solely at the discretion of the instructor.

NO EXTRA CREDIT PROJECTS WILL BE ASSIGNED!

Expectations

While learning Epidemiology will involve a considerable amount of mathematical calculations, Epidemiology is not just numbers. Understanding what the numbers you calculate *mean* and how they are interpreted is ***critical*** to your success in this course and as a public health professional. How I present numbers with labels and interpretation in the lectures is how I expect for you to do the same in your assignments. Your answer should have meaning when separated from the work leading up to the final answer. Similarly, on assignments and exams, when I ask for an interpretation I expect that you will provide an interpretation that is relevant to the problem you are working on. It is not enough to say that “people with the exposure were 2.5 times more likely to have disease.” Your interpretation should be stated as (e.g., in a smoking and lung cancer question) “People who smoked were 2.5 times more likely to develop lung cancer than people who never smoked,” for example.

As some calculations in this course will require multiple steps leading to a final number, it is strongly suggested that you carry FIVE decimal places after the decimal throughout the calculation. Rounding up/down at every step can result in very different answers than what I have in my answer keys and is a source of propagation of error. Once you get to the final step, round to one/two decimal places depending on the magnitude of the association reported.

If you have ANY questions about how to report your results, write out your answers, carry decimal places, round off answers, select a constant, or anything else relevant to turning in assignments or writing exams, ask me ***before*** turning in the assignment or exam to avoid losing points. My graduate assistant will be available to help you review mathematical concepts.

Class Attendance and Participation Policy

Federal regulations require attendance be verified prior to distribution of financial aid allotments. Regular attendance is expected. Your attendance will be verified at the first regular class session.

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.

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 Discipline Coordinator. It is the responsibility of the Discipline Coordinator 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 Discipline Coordinator 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.

CONFIDENTIALITY

In accordance with provisions of the Family Educational Rights and Privacy Act of 1974 and the Georgia Open Records Act, any information related to a violation of academic dishonesty or the outcome of a judicial hearing regarding academic dishonesty, is prohibited and must be treated as confidential by members of the faculty."

Academic Handbook

Students are expected to abide by the Academic Handbook, located at

<http://admissions.georgiasouthern.edu/pdf/orientation/documents/Eagle%20Eye/EagleEye.pdf>

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://students.georgiasouthern.edu/registrar/resources/calendars>

Portfolio Inclusion

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.

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 announce any such changes in class. It is the responsibility of the student to know what changes have been made in order to successfully complete the requirements of the course.