 VibS 489: Special Topics in Introductory Epidemiology

Semester: Spring 2006
Meets: Tuesday, Thursday, 12:45 to 2 pm in Room 107D, Anatomy Office Conference Room

Instructor:
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Course Objectives:
1. Define epidemiology and appreciate its occurrence in everyday life and in health-related disciplines.
2. Describe, explain and calculate the measurements commonly used to describe and quantify disease.
3. Describe and explain the common methods of disease transmission using appropriate terminology.
4. Explain and calculate diagnostic/screening test accuracy and precision.
5. Identify and describe the commonly used epidemiological study designs, their strengths and weaknesses.
6. Identify chance, bias and confounding in epidemiological studies and describe ways to correct them in the design and/or analysis.
7. Understand the relationship between power and sample size and how they effect studies.
8. Describe and apply the criteria for determining causation.

Attendance and Absences: Attendance at all classes, exercises, quizzes and examinations is required. No make-up examinations will be provided for students who miss an examination unless an absence is excused in accordance with TAMU Student Rule #7. Students missing an exam without an excused absence will receive 0 points. There will be no exceptions. Make-up examinations will be permitted only in the cases of university excused absences. The time table for completing the make-up will be set by the instructor. Students are responsible for missed work.

Academic Integrity:
"An Aggie does not lie, cheat, or steal or tolerate those who do."
I expect students to function under the Aggie Honor Code. For more information, see the Honor Council Rules and Procedures on the web http://www.tamu.edu/aggiehonor. Scholastic dishonesty, in any form, will not be tolerated. This means no cheating of any kind. Scholastic dishonesty includes, but is not limited to, acquiring answers for any assigned work or examination from any unauthorized source; working with another person or persons on any assignment or examination when not specifically permitted by the instructor; observing the work of other students during any examination; providing answers for any assigned work or examination when not specifically authorized to do so; informing any person or persons of the contents of any examination prior to the time the examination is given; plagiarism (failing to credit sources used in a work product in an attempt to pass off the work as one's own or attempting to receive credit for work performed by another, including papers obtained in whole or in part from individuals or other sources); agreeing with one or more persons to commit any act of scholastic dishonesty; the written or oral presentation of results of research without the research having been performed; changing information on tests, quizzes, examinations, reports, or any other material that has been graded and resubmitting it as original for the purpose of improving the grade on that material.
The instructor reserves the right to dismiss from the course and administer a course grade of "F" to any student involved in incidents of scholastic dishonesty.
Course Grading:
Class participation, attendance, improvement, other subjective criteria: 73 points
Epidemiology in daily life journal: 27 points
Exercises on 9 topics (10 points each): 90 points
Quizzes on terminology (6, drop lowest score, 15 pts each): 75 points
Midterm exam 45 points
Final exam 90 points
TOTAL 400 points
360 points and above: A
320 to 359 points: B
280 to 319 points: C
240 to 279 points: D
Less than 240 points: F

You should read the chapter BEFORE class. Dates are approximate and subject to change.

<table>
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<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Quiz or Exercise Due</th>
<th>Readings</th>
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<td>January 17</td>
<td>Unit 1: Introduction, Epidemiology, History</td>
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<td>chapter 1, Last article</td>
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<td>1</td>
<td>January 19</td>
<td>Continued Unit 2: Disease Transmission</td>
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<td>chapter 2, west nile article</td>
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<td>January 24</td>
<td>Continued exercise 1</td>
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<td>January 26</td>
<td>Unit 3: Measuring disease</td>
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<td>March 31</td>
<td>Continued</td>
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<td>chapter 4, chapter 11 first 5 pp</td>
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<td>3</td>
<td>February 2</td>
<td>Unit 4: Diagnostic and screening tests</td>
<td>exercise 2</td>
<td>MMWR article</td>
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<td>4</td>
<td>February 7</td>
<td>Continued, calculations</td>
<td>quiz #2 on unit 3 &amp; 4</td>
<td>chapter 5, first 4 pp ch 18</td>
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<td>Unit 5: Introduction to study designs, Clinical trials</td>
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<td>Ethics and informed consent,</td>
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<td>Unit 6: Power and sample size</td>
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<td>February 23</td>
<td>Current topics in Epidemiology</td>
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<td>February 28</td>
<td>Unit 7: Observational designs: Cohort studies</td>
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<td>March 7</td>
<td>Cross-sectional studies</td>
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<td>chapter 10</td>
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<td>Exam</td>
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<td>March 13-17</td>
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<td>Descriptive and ecological studies</td>
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<td>11</td>
<td>March 30</td>
<td>Review of study designs</td>
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ADA Policy Statement:
The following ADA Policy Statement (part of the Policy on Individual Disabling Conditions) was submitted to the University Curriculum Committee by the Department of Student Life. The policy statement was forwarded to the Faculty Senate for information. The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Cain Hall or call 845-1637.

Instructions for Epidemiology in Daily Life Journal:
Find 9 examples of epidemiology in every day life from newspapers, journals, internet, other classes, etc. These must be brought into class. Be prepared to share: how each example is related to your life or your friends and family and to epidemiology. Each example is worth 3 points in the course. The points will be assigned based on the following criteria:

1. Creative choices in the examples, where they come from:
   2 points: took a very everyday, mundane source and recognized its relationship to epidemiology
   1 point used a source with obvious relationship to epidemiology but harder to find
   1/2 point: used a standard epidemiology source

2. How well you illustrate how they are connected to epidemiology:
   1 point: clearly demonstrates how the example is linked to epidemiology
   1/2 point gives an idea of the connection without making it explicit or quotes a definition
   0 point: failed to describe how it is connected

The first 3 examples must be collected by February 17. The second 3 examples must be collected between February 18 and March 29th and 3 more between March 30 and April 26. All are due April 26 in class. Current events are particularly good choices.
If you have not collected an example for the time period, you will get no points.

Advice on Quizzes:
These are designed to be certain that you understand the new terminology that is used in epidemiology. They will be relatively short, in class, closed book, no notes. A review list of terms for each quiz will be provided in class prior to the quiz. Be prepared to explain what they mean in your own words, give an example, and use appropriately.

Advice on Exercises: