Texas A&M University - Corpus Christi
College of Nursing and Health Sciences

NURS 6301-W01- Epidemiology and Statistics for Evidence-Based Practice

Syllabus

Spring 2017

FACULTY: Sara A. Baldwin, PhD, RN, APHN-BC, Associate Professor

OFFICE: Island Hall, 340

OFFICE HOURS: By appointment: E-mail through Bb to schedule

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E-MAIL: sara.baldwin@tamucc.edu

FAX: (361) 825-2484

CREDITS: 3 semester hours

COURSE DESCRIPTION:

Principles of epidemiology and biostatistics applied to the management of population health.

Prerequisites: Graduate standing and completion of: None

General information: The purpose of this course is to prepare doctoral students to analyze epidemiological, bio statistical, occupational and environmental data in the development, implementation, and evaluation of clinical prevention and population health. This course is required for students enrolled in the Texas A&M University-Corpus Christi College of Nursing and Health Sciences Doctor of Nursing Practice program. This course is based on the science and application of epidemiology.

Online delivery: This course is delivered exclusively through online technology and may be accessed at http://Bb9.tamucc.edu. Students will need to provide PowerPoint, word processing, and other software as needed to complete requirements of this course and may need to download collaborative tools such as the WebEx application.
LEARNING OUTCOMES:

Upon completion of the course, students will be able to:

1. Calculate and interpret health indicators for populations. *(AACN Essentials I, III, VII).*
2. Integrate biostatistics as a framework for the analyses of data and the application of principles to the biological sciences and population health. *(AACN Essentials I, III, VII).*
3. Evaluate public policy using epidemiological concepts in evidence based nursing practice. *(AACN Essentials V, VII).*
4. Explain implications for the development of data-based programs for disease/injury prevention and control as well as policy implications. *(AACN Essentials III, IV, VII).*
5. Develop and evaluate a diverse population intervention plan with a plan to improve specific population health outcomes. *(AACN Essentials II, IV, VII, VIII).*

REQUIRED TEXTS AND RESOURCES:


SUGGESTED RESOURCES:

Center for Disease Prevention and Control, Publications and information products, retrieved from [http://www.cdc.gov/nchs/hus/previous.htm](http://www.cdc.gov/nchs/hus/previous.htm)

Community Tool Box retrieved from [http://ctb.ku.edu/en/developing-intervention](http://ctb.ku.edu/en/developing-intervention)

INSTRUCTIONAL STRATEGIES:
Asynchronous online unit discussions
Self-study quizzes and case studies
Required unit reading/writing and exercises
Written report and problem analyses
Written comprehensive paper
Final exam

LEARNING EXPERIENCES:
Students can meet course objectives through successful completion of all assignments, thoughtful study of the textbook and other resources provided by the instructor, and earnest participation in discussions with peers and instructor throughout the course. While the instructor will provide guidance and consultation, students are responsible for identification of individual learning needs, self-direction and motivation, seeking help when needed, and successful completion of the course requirements. Students should exhibit self-direction and demonstrate that learning has occurred by the successful completion of coursework which may include field experiences. Students are responsible for documenting time in field experiences in the DNP portfolio.

COURSE COMMUNICATION:
The Blackboard (Bb) Mail tool is required for communication within the course. When contacting the instructor or classmates in this course, always use the Bb Mail tool rather than another e-mail account. This tool is accessed in the Bb Mail section of the Course Menu. Messages sent within Bb are archived within the course, thus eliminating lost correspondence.

COURSE TIME EXPECTATIONS:
All assignments and discussions are due by 11:59 pm on the specified due date in the course schedule unless prior arrangements are made with the instructor. Please note and remember that a 3 credit hour course requires a weekly time commitment of a 3-hour presence associated with 9 hours of preparation time. That expectation remains the same in an on-line course. The time spent in the course is set by each student’s personal learning schedule. Students should review Bb mail and announcements at least every 48 hours.
COURSE REQUIREMENTS:

1. Students are expected to have access to a computer that can support Bb applications and all related course materials. A backup plan should be in place if normal computer access becomes unavailable, i.e. arrange use of a computer elsewhere.
2. Any problems with technology, computer, internet, Bb or other applications should be dealt with through the IT (information technology) helpline at (361) 825-2692 or computer.helpline@tamucc.edu
3. Any problems understanding the assignments or due dates should be brought to the attention of the instructor, preferably within the first week of class.
4. Students are expected to complete the course orientation and Academic Honesty Statement prior to beginning work on course content.
5. All e-mail communication with the instructor should occur through Bb, unless otherwise noted. Bb mail and announcements should be reviewed at least every 48 hours.
6. All assignments are due by 11:59 pm on the scheduled date unless other arrangements have been made with the instructor before the due date. Late work will be penalized with a 10% grade deduction/day for up to 3 days; however exceptions will be considered for extreme emergencies where pre-planning was not possible.
7. Respectful and timely participation in discussion forums is required. Since it is assumed each student will be prepared for discussions, all contributions will be considered knowledgeable contributions. Disrespect in any form will NOT be tolerated.
8. All information disclosed through course chats or discussions is confidential and should not be shared with others outside the context of this course.
9. Students should notify the instructor if they withdraw from the course and should not attempt to access course materials once they have withdrawn.
10. Students are expected to complete a course evaluation at the end of the course.
11. Students can expect the instructor to respond to Bb e-mail messages within 48 hours.
12. Students can expect the instructor to grade assignments within 2 weeks of submission unless otherwise informed.

GUIDELINES FOR FORM AND STYLE OF WRITTEN ASSIGNMENTS:

Students are expected to follow instructions associated with the assignments for this course. If you are confused about an assignment, you should contact the instructor in a timely manner. Unless otherwise instructed, each student must adhere to the APA Publication Manual, 6th or 7th Edition guidelines for formatting and organizing written assignments. The campus Center for Academic Student Achievement (CASA) provides writing support both in person and in an online format. The contact at the Center is Noelle Ballmer at 361-825-2254 and the web link is http://casa.tamucc.edu/
COURSE ASSIGNMENTS AND GRADING:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage of Grade</th>
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<tbody>
<tr>
<td>Unit Discussion Forums - 4 weeks (1 forum/unit)</td>
<td>10%</td>
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<tr>
<td>Pre-post Unit Quizzes - 4 quizzes (1 quiz/unit)</td>
<td>Required Pass/Fail</td>
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<tr>
<td>6 Modules CDC On-Line Self-Study</td>
<td>15%</td>
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<tr>
<td>Descriptive Epidemiology; Capstone Problem Analyses Report</td>
<td>20%</td>
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<tr>
<td>Article Critique: Population Health Model</td>
<td>10%</td>
</tr>
<tr>
<td>Population Intervention Plan (PIP) Paper (83% or better required to pass course)</td>
<td>35%</td>
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<tr>
<td>Epidemiology &amp; Biostats Final Exam (timed, open access) 83% or better required to pass course</td>
<td>10%</td>
</tr>
<tr>
<td>Doctor of Nursing Practice Experience Portfolio</td>
<td>No course credit earned</td>
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<tr>
<td><strong>Total</strong></td>
<td>100%</td>
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GRADING SCALE FOR COLLEGE OF NURSING AND HEALTH SCIENCES:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Points</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B</td>
<td>83-89</td>
</tr>
<tr>
<td>C</td>
<td>75-82</td>
</tr>
<tr>
<td>D</td>
<td>67-74</td>
</tr>
<tr>
<td>F</td>
<td>Below 67</td>
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COURSE CONTENT/ TOPICS:

Unit I: Introduction to Population health and Epidemiology  
Unit II: Introduction to Population Health Data; Metric Calculations and Biostatistics  
Unit III: Initiating a Population Intervention Plan and Evaluating Research  
Unit IV: Synthesis: Developing and Evaluating a Population Intervention Plan

<table>
<thead>
<tr>
<th>Class Date</th>
<th>Content Focus</th>
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<tbody>
<tr>
<td>TBA</td>
<td>Introduction to Population Health and Epidemiology</td>
</tr>
<tr>
<td></td>
<td><strong>DUE: Article Critique: Population Health Model</strong></td>
</tr>
<tr>
<td></td>
<td>Introduction to Population Health Data; Metric Calculation and Biostatistics</td>
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<tr>
<td></td>
<td><strong>DUE: Descriptive Epidemiology; Analyses of a Capstone Problem Report</strong></td>
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Setting the Stage for your PIP Plan
- Mapping out the plan, approaches, and evaluation
- Resources for gathering data

DUE: CDC on-line Epidemiology Self-Study Course

Synthesis: Developing, Evaluating and Presenting a Population Intervention Plan
Presenting the Plan

Population Intervention Plan Paper (PIP)
Final Exam-Epidemiology & Biostats (Open-Access)

COURSE WORK GUIDELINES AND GRADING CRITERIA:

UNIT DISCUSSION FORUM GUIDELINES

During each unit, all students will be expected to participate in an online dialogue in the Discussion Forum. Students are expected to respond to each of the initial posts. You are expected to use two professional references (peer-reviewed journals, textbooks, or authoritative sources such as the CDC).

Guidelines for discussion participation are as follows.

1. You will select a learning exercise question at the end of one of the assigned reading chapters and will post on the discussion board. Students will have the first two weeks of each unit to post an initial response and will have the third week of the unit to post a response to two fellow students. Questions need to be posted by 6pm on the calendar date that discussion opens.

QUESTIONS SHOULD BE: 1) well-grounded in the literature, 2) correctly composed in terms of use of the concepts and literature, 3) unbiased, 4) appropriate and relevant, 5) open-ended, 6) broad in latitude, 7) clear and precise, 8) and encouraging of discussion.

Try to avoid questions with YES, NO or MAYBE as potential responses. Try to avoid simple knowledge questions such as WHY, WHEN, WHERE, and WHAT.

Evaluation

This assignment is evaluated as part of the course grade for participation attributed to each learning unit. Evaluation is based upon not only the Rubric for Online Participation but the quality, timing and quantity of submissions.
Below is a general description of the major assignments in the course. More detailed instructions may be found in within each specific Bb Unit under Discussion Assignments.

**RUBRIC FOR ONLINE PARTICIPATION**

*Rubric for Assessing the Effectiveness of Student Participation in Online Discussion*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promptness and Initiative</td>
<td>Does not respond to most postings, rarely participates</td>
<td>Responds to postings several days after initial discussion, limited initiative</td>
<td>Responds to most postings within a 48 hour period</td>
<td>Consistently responds to postings promptly, demonstrates good initiative in directing the conversation</td>
<td></td>
</tr>
<tr>
<td>Delivery</td>
<td>Utilizes poor spelling and grammar, posts appear hastily composed, no sources cited</td>
<td>Multiple errors in spelling and grammar, sources are poor quality</td>
<td>Few grammar and spelling errors, uses singular peer-reviewed source</td>
<td>Consistently uses correct grammar and spelling, APA format is correct, 2 sources are peer-reviewed within last 5 years</td>
<td></td>
</tr>
<tr>
<td>Relevance</td>
<td>Posts topics which do not relate to the discussion content, “clutters” the board</td>
<td>Posts are short in length and offer no further insight into the topic</td>
<td>Frequently posts topics that are relevant to discussion content, asks meaningful questions</td>
<td>Consistently posts topics related to the discussion topic, cites additional relevant references to support position</td>
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</tr>
<tr>
<td>Expression</td>
<td>Does not express opinions clearly and articulately, “rambles,” or meaningless chatter</td>
<td>Unclear connection to topic evidenced in minimal expression of ideas</td>
<td>Opinions and ideas are stated clearly with occasional lack of connection to the topic or professional academic discourse</td>
<td>Consistently facilitates academic discourse in a clear, concise, and articulate and professional way</td>
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</tr>
<tr>
<td>Contribution to the Online Learning Community</td>
<td>Does not make an effort to participate, is disconnected and indifferent</td>
<td>Occasionally makes meaningful reflection on the group effort, minimal effort to become involved</td>
<td>Frequently attempts to direct the discussion and to present relevant viewpoints for consideration by the group</td>
<td>Aware of needs in the community, motivates and enriches group discussion, presents creative approaches to the topic</td>
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Adapted from Edelstein, Susan and Jason Edwards. “If You Build it, They Will Come: Building Learning Communities Through Threaded Discussions.” Available at: http://www.westga.edu/~distance/ojdla/spring51/edelstein51.html
Analyses of Capstone Topic as a Population-Based Problem
This first assignment is a way for students to identify and analyze a population-based problem as it relates to your DNP capstone topic area. The idea is for students to present and receive peer feedback on project ideas before plunging into the Population Intervention Plan (PIP). In your initial discussion post, it is important that you clearly describe your chosen capstone problem from an epidemiologic perspective. Provide a 2-paragraph referenced analysis of the health problem and at least two population health outcomes designed to strengthen health promotion and disease prevention research, practice and policy. This discussion will provide a wide range of ideas and perspectives that vary your area of interest and will lay a sturdy foundation on which you can build your proposal. This counts toward 5% of the final grade.

Centers for Disease Control on-line Epidemiology Self-Study (CDC) SS1978 Course on Epidemiology.

This is an online self-study course students need to complete prior to taking the Bb final exam for this course.

- At the beginning of the semester, create your own personal account through the CDC at: [http://www2a.cdc.gov/TCEOnline/](http://www2a.cdc.gov/TCEOnline/) Register for SS1978

After you register, select the “HTML” online version and go directly to the online self-study: There are 6 modules with exercises and quizzes. This counts toward 15% of the final grade. [http://www.cdc.gov/ophss/csels/dsepd/SS1978/](http://www.cdc.gov/ophss/csels/dsepd/SS1978/)

Descriptive Epidemiology; Capstone Problem Analyses Report
The goal of this project is to gather and interpret descriptive epidemiological information on one of your population health outcomes identified in your Group Discussion assignment. Use descriptive epidemiology measures of disease frequency and measures of comparison described in Bb Unit 1-2 and Gordis (2014). The report should be an individual effort; identical reports or reports with identical sections will be penalized. You may cut and paste a figure from a sources into your report (with proper referencing), but not a table. You may not cut and paste sections of text greater than one sentence, and any text that is copied from another source should be either contained in quotes or paraphrased (preferred if possible) and clearly referenced If there are too many quotes in a report, then points will be lost. All tables and figures must be accompanied by a written discussion of their content; that is, don’t put tables/figures into the report and not discuss them. This counts toward 20% of the final grade.

Population Intervention Plan (PIP):
The purpose of this paper is to analyze epidemiological, biostatistical, occupational, and environmental data in the development, implementation, and evaluation of a population program.
plan for an identified health issue/problem. The report should be an **individual effort**; identical reports or reports with identical sections will be penalized. You are in charge of a population for a low-income ethnically diverse community. You have just received a five-year grant to fund an intervention to reduce disparities on a primary health issue in your population/community. The program must identify baseline data rates and patterns of diseases to create an ongoing surveillance system. Based on what you have learned in this course and using any one of the population program plans described in your readings e.g. Logic Model, PRECEDE-PROCEED Model (Green, 1968), etc. design a small program or initiative to address this disparity and provide program evaluation criteria for 1 and 5-year evaluation measurement. This plan will be presented via a narrated YouTube video. *This counts toward 40% of the final grade.*

**POLICIES:**

**Evaluation Input From Students**

The faculty of the College of Nursing and Health Sciences places great value on evaluative input from students. Evaluation of courses, instructors and clinical facilities provides the College with important data which is used to strengthen the program. Data is analyzed as to trends and themes and is important to curriculum and sequencing decisions. All evaluations for courses posted are online. The online mechanism allows us the opportunity to tabulate and store information in order to analyze trends within the curriculum. Please be assured that this information is secured and not released until after grades are submitted. No names are available to faculty. In order to garner some reliability and validity, the College must have representative data from the student population. That representation, based on the literature, has been set at 70%. The College is anticipating that students will thoughtfully participate in the evaluation process which will assist the faculty with the growth of the program. A link to evaluations will be available on Blackboard toward the end of the semester. Thank you in advance for your assistance with the evaluation process.

**Academic Integrity and Honesty**

It is expected that University students will demonstrate a high level of maturity, self-direction, and ability to manage their own affairs. Students are viewed as individuals who possess the qualities of worth, dignity, and the capacity for self-direction in personal behavior. University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to a penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, forgery, or plagiarism. (Plagiarism is intentionally, knowingly, or carelessly presenting the work of another as one’s own). Please see the following sites for additional information:

University Student Handbook and Code of Conduct: [http://www.tamucc.edu/~students](http://www.tamucc.edu/~students)
Students with Disabilities

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 Disability Services Office at 361.825.5816 or visit the office in CCH 116. If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disabilities Services office for assistance at (361) 825-5816

Title IX

As part of the Texas A & M Corpus Christi University policy, pregnant students are urged to contact the Title IX office for facilitation of academic issues impacted by pregnancy, delivery and subsequent complications. Contact information: Mr. Samuel Ramirez, Title IX Coordinator or Ms. Rosie Ruiz, Deputy Title IX Coordinator (825-5826).

Grade Appeals Process

The College of Nursing and Health Sciences (CONHS) adheres to the University’s student grade appeal procedures described in Section 13.02.99.C2.01 (revised May, 2013) and follows those guidelines. See http://academicaffairs.tamucc.edu/Rules_Procedures/ for the University procedure and see http://conhs.tamucc.edu/shb/ for the CONHS process identified in the Student Handbook.

Support Services

Students are encouraged to seek faculty assistance in accessing University Services, including tutoring, health services, personal counseling, degree counseling, financial aid, learning resources, job/work placement, career guidance, and computer/technical support/instruction. If a student is interested in other support services provided by the University, the student is encouraged by the College of Nursing and Health Sciences and the University to seek these services.
MILITARY STUDENTS

Active duty military personnel, military spouses, and veterans with special circumstances (e.g. deployment, drill requirements, disabilities) are welcome and encouraged to communicate these circumstances, in advance if possible, to the course and clinical instructors.