



Fayetteville State University
School of Education
Department of Health, Physical Education
and Human Services

HEED 410 - Introduction To Epidemiology

1. LOCATOR INFORMATION

Semester Fall 2010

Credit Hours 3

Course Location & Meeting Time _____

Office Hours M _____ T _____ W _____ TR _____ F _____

Instructors	Office Location	Telephone	Email
Dr. Nosa Obanor	Health & Physical Education Complex (HPEC) 322	672-1524	nobanor@uncfsu.edu
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FSU Policy on Electronic Mail: Fayetteville State University provides to each student, free of charge, an electronic mail account (username@uncfsu.edu) that is easily accessible via the Internet. The university has established FSU email as the primary mode of correspondence between university officials and enrolled students. Inquiries and requests from students pertaining to academic records, grades, bills, financial aid, and other matters of a confidential nature must be submitted via FSU email. Inquiries or requests from personal email accounts are not assured a response. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail.

Rules and regulations governing the use of FSU email may be found at <http://www.uncfsu.edu/PDFs/EmailPolicyFinal.pdf>

2. COURSE DESCRIPTION

For classroom teachers to be effective facilitators of learning and agents for a healthier society, they must have a background of knowledge and awareness of various concepts and principles that comprise specific knowledge in the principles and practices of disease control. This course deals with the principles of epidemiology used in the investigation of events such as disease, accidents and other health-related problems. It also deals with the application of epidemiologic methods to evaluate the distribution and determinants of disease in the population. The use of biostatistical principles and the interpretation of evaluation and conclusions from data will be investigated.

3. TEXTBOOK

Rossignol, Annette, Principles of Practices of Epidemiology, McGraw Hill

4. SCHOOL OF EDUCATION'S CONCEPTUAL FRAMEWORK

The conceptual framework defines the unit's vision which underscores the school's purpose for preparing its candidates for teaching and leadership roles in a global society. The unit prepares candidates who support student learning, within the context of family and community participation, for a diverse, technological and global society. We achieve this vision through teaching, research, and service. Our conceptual framework serves as a lens through which we view our education professionals in the music program. The themes of our conceptual framework include knowledgeable and reflective education professionals; working with families and communities; respect for diversity and individual worth; technological competence and educational applications; and caring dispositions and ethical responsibility.

5. SPECIFIC COURSE OBJECTIVE

The student will learn, understand and be able to apply epidemiologic principles and methods in evaluating the distribution and determinants of disease in the population. Upon completing this course, the student will be able to demonstrate a competency level of at least 85% in each of the following:

1. Understand and state the historical and theoretical bases of epidemiology.
2. Identify the statistical methods used in epidemiology.
3. Assess and explain the distribution of disease over person, place and time.
4. Identify the research methods used in analytic epidemiology.
5. Explain and apply epidemiology to the prevention of disease and health promotion.

6. COURSE GOALS AND OBJECTIVES

Upon satisfactory completion of this course, the student will be able to demonstrate at a level of 85% or higher the following:

1. Be able to comprehend both the role and context of health instruction within the school and community.
2. Be knowledgeable of important health determinants, health risks, health goals and health-related behaviors.
3. Be able to determine the health needs, problems, interests and progress of students.
4. Develop a research design on a selected health problem based on the scientific method of research.
5. Demonstrate computer competencies, utilizing various software and web-sites Related to public health problems.

7. NCDPI, NCATE OR SPECIALTY AREA STANDARDS

Include the NCDPI Specialty Area Standards, the NCATE Standards, and the assessment(s). Only include the standard or standards you will address in this course.

Standards Used in this Course	NCDPI Health Education Standards	NCATE Standard(s)	Assessment(s)
X	Standard 1. Teachers know health content including health risks for youth and prevention and behavior change strategies.	I	
X	Indicator 1: Teachers have a medically and factually accurate base of knowledge in the following areas; nutrition, health related fitness, injury prevention and safety, decision making/problem solving, community and environmental health, conflict resolution, mental and emotional health, stress management, self esteem, substance abuse (specifically alcohol, tobacco, and other drugs), disease prevention, and consumer health.	Content Knowledge	Examination Health Risk Appraisal Community Risk Assessment
X	Indicator 2: Teachers develop knowledge about health risks for youth that lead to morbidity, mortality, and social problems and apply relevant content to prevention strategies.	Content Knowledge	Examination Presentation on disease
	Indicator 3: Teachers comprehend theories of behavior change and make connections between theory and practice.		
X	Indicator 4: Teachers have knowledge of the <i>NCSCOS</i> in healthful living education, the focus on a skills approach, and understand the organization and importance of all curricular strands.	Knowledge	Assignment & Review of Comprehensive Health Program Design
	Indicator 5: Teachers demonstrate knowledge of organization and		

	collaboration within schools and among school staff to promote and enhance coordinated school health programs.		
X	Indicator 6: Teachers demonstrate knowledge of legislation and Board of Education policy that affects health education and comprehend the impact on health education in public schools (including abstinence until marriage, alcohol, tobacco and other drugs, cardiopulmonary resuscitation).	Content Knowledge Student Learning	Discussion Article Review
X	Standard 2. Teacher must be able to investigate and determine the health needs, problems, and interests of students.	IV	
	Indicator 1: Teachers demonstrate the use of appropriate health behavior assessments.		
X	Indicator 2: Teachers utilize appropriate local, state, and national data (e.g., Youth Risk Behavior Survey Data – YRBS) to inform instructional decisions and enhance the relevance of instruction.	Pedagogical and Professional knowledge, skills and disposition Content Knowledge Student Learning	Analyze outcome data Project
	Indicator 3: Teachers demonstrate the ability to address student needs in health education based on observation and communication.		
X	Indicator 4: Teachers demonstrate assessing the community and accessing community resources to determine the needs of students.	Student Learning Content Knowledge	Project implementation Presentation of Community Risk Assessment
	Standard 3. Health teachers plan and implement effective instruction in the health component of healthful living education.		
	Indicator 1: Teachers plan and implement developmentally and age-appropriate instruction to meet competency goals and objectives in the <i>North Carolina Standard Course of Study</i> for healthful living education using a variety of teaching and learning strategies.		
	Indicator 2: Teachers facilitate a positive learning environment that is student centered and actively engaging for students.		
	Indicator 3: Teachers will have high expectations for student acquisition of skills for prevention of the following health risks: self esteem building, including self-perception, self acceptance, and self efficacy; behavior self management, including awareness/self monitoring, ethics development, decision making/problem solving, and planning behavioral strategies; communicating, including expressing empathy, assertiveness, conflict resolution		

	and negotiation, and responding to persuasion; using appropriate resources, especially for assessing need for help, locating sources of help, exercising rights, and overcoming obstacles.		
	Indicator 4: Teachers evaluate and select instructional materials that support the competency goals and objectives in the <i>NCSCOS</i> for healthful living education, including evidence-based curricula and instructional materials where alignment exists.		
	Indicator 5: Teachers will be able to link health knowledge and skills with content and skill development in other disciplines.		
	Indicator 6: Teachers will use and incorporate student use of technology when planning and implementing instructional strategies.		
	Indicator 7: Teachers use reading and writing as a means of teaching health education and promoting literacy.		
X	Standard 4. Teachers are able to select, design, and implement assessments to evaluate student learning and health behaviors and subsequently utilize information to improve teaching.		
X	Indicator 1: Teachers apply a variety of assessment activities and instruction to evaluate students' health knowledge and skill, including authentic assessment and appropriate use of technology.	Pedagogical and Professional knowledge, skills and disposition Content Knowledge	Personal Health Behavior Self-Management Plan
X	Indicator 2: Teachers assess health behaviors as an outcome of learning information in a variety of ways.	Professional knowledge, skills and disposition Content Knowledge	Personal Health Behavior Self-Management Plan
X	Indicator 3: Teachers interpret and use assessment data to make informed curricular and instructional decisions.	Professional knowledge, skills and disposition Content Knowledge	Personal Health Behavior Self-Management Plan
X	Standard 5. Teachers demonstrate equity and fairness and promote respect and appreciation for diversity.		
	Indicator 1: Teachers recognize special health needs and adapt instruction for various racial/ethnic, limited English proficient, and exceptional children.		
	Indicator 2: Teachers integrate a variety of modes of instruction and evaluation to address diverse learning styles.		
	Indicator 3: Teachers recognize and value diversity of student learners.		
X	Indicator 4: Teachers promote fairness,	Student Learning	Discussion/ Role Play

	social justice, and peer acceptance to ensure the development of social and emotional wellness.	Subject Matter	Article Review re: Health Disparities and Disease Prevalence for Minority Populations
X	Indicator 5: Teachers establish and maintain high expectations for all students.	Student Learning Subject Matter	Discussion/ Role Play Article Review re: Health Disparities and Disease Prevalence for Minority Populations
	Standard 6. Teachers demonstrate leadership and model positive health behaviors within the classroom, school, and community.		
	Indicator 1: Teachers recognize the importance of coordinated school health programs and have a plan for coordinating health education with other components of a coordinated school health program.		
	Indicator 2: Teachers understand and communicate the value of health education to students, colleagues, administrators, parents, and other community members.		
	Indicator 3: Teachers demonstrate the disposition and skills to facilitate cooperation among other health educators, teachers of other disciplines, and appropriate school staff.		
	Indicator 4: Teachers serve as a resource for students, families, and staff by interpreting and responding to requests for health information.		
	Indicator 5: Teachers demonstrate their commitment to health and wellness by demonstrating with their own behavior a healthy lifestyle.		
X	Standard 7. Teachers participate in reflective practices that promote creativity, stimulate personal growth, and enhance professionalism.	VII	
X	Indicator 1: Teachers stay abreast of current recent research and new innovations within the field of health education.	Content Knowledge Student Learning	Critical Thinking Activity Service Learning Project
	Indicator 2: Teachers demonstrate their ability to be life long learner		
	Indicator 3: Teachers reevaluate instructional decisions and analyze the relationships between practice and student learning.		
	Indicator 4: Teachers have multiple experiences with observation and field practice.		
	Indicator 5: Teachers demonstrate the ability to collaborate with colleagues to reexamine their practice critically and seek		

	help from colleagues to continue to develop as teachers and learners.		
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8. CORE STANDARDS

Include the NCDPI Core Standards and the assessment(s). Only include the standard or standards you will address in this course.

Standards Used in this Course	NCDPI Core Standards	Assessment(s)
X	1. Teachers know the content they teach.	Examination/ Presentation
	2. Teachers know how to teach students.	
	3. Teachers are successful in teaching a diverse population of students.	
	4. Teachers are leaders.	
X	5. Teachers are reflective about their practice	Critical Thinking Activity/ Service Learning Project
X	6. Teachers respect and care about students.	Examination

9. DIVERSITY

Include the NCDPI Diversity Standards and the assessment(s). Only include the standard or standards you will address in this course.

Diversity Standards Used in this Course	NCDPI Diversity Standards	Assessment(s)
X	1. Teachers understand the central concepts, tools of inquiry, and structures of the discipline(s) they teach and can create classroom environments and learning experiences that make these aspects of subject matter accessible, meaningful and culturally relevant for diverse learners.	Examination/ Paper
	2. Teachers understand how students' cognitive, physical, socio-cultural, linguistic, emotional, and moral development influences learning and address these factors when making instructional decisions.	
	3. Teachers work collaboratively to develop linkages with parents/caretakers, school colleagues, community members and agencies that enhance the educational experiences and well being of diverse learners.	
X	4. Teachers acknowledge and understand that diversity exists in society and utilize this diversity to strengthen the classroom environment to meet the needs of individual learners.	Examination Class discussion
X	5. Teachers of diverse students demonstrate leadership by contributing to the growth and development of their colleagues, their school and the advancement of educational equity.	Group Activities
X	6. Teachers of diverse students are reflective practitioners who are committed to educational equity.	Service Learning Reflection Project

10. TECHNOLOGY

This course will help strengthen and enhance the candidates' technological competence and skill in using technology. Candidates will use a variety of technologies to enhance their knowledge of technology in this course. Some technologies for this course may include: productivity tool (Power Point, presentation software), Internet, web page construction, e-mail, on-line course applications, grade book, video camera. Check all that apply for this course. Please include any technologies that you use that are not listed.

	Technological Applications for this Course
X	Productivity tool (Power Point)
X	Presentation software
X	Internet
	Web page construction
X	e-mail
X	On-line applications
	Grade book
	Video camera
	Scanner
X	Excel
	Smart board
	Lap Top and LCD panel
	Music Stereo and CD

Include the NCDPI Technology Standards and the assessment(s). Only include the standard or standards you will address in this course.

Technology Standards Used in this Course	NCDPI Technology Standards	Assessment(s)
X	1. Teachers demonstrate a sound understanding of technology operations and concepts.	Presentation Web-based literature search
X	2. Teachers plan and design effective learning environments and experiences supported by technology.	Use of Black Board to enhance classroom discussion and assignments
X	3. Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning.	Excel Data Analysis
	4. Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.	
	5. Teachers use technology to enhance their productivity and professional practice.	
	6. Teachers understand the social, ethical, legal and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice.	

11. DISPOSITIONS

Directions: Check all that apply. Dispositions will be addressed through readings, modeling, reflecting, field experiences, discussion and other approaches. This course will seek to enhance and strengthen the dispositions listed below.

Professional Competence		Professional Responsibilities	
X	Appreciates and engages in self-reflection		Dresses appropriately for the setting
	Shows a commitment to ongoing learning	X	Is punctual
X	Desires to learn and apply new technologies	X	Attends class regularly and participates in the class

X	Is receptive to new ideas and feedback	X	Completes assignments and tasks in a timely manner
X	Writes and speaks clearly and effectively	X	Willing to go beyond required assignments
X	Uses culturally sensitive language when communicating with families	X	Shows initiative and motivation
X	Respects the privacy of students and their families	X	Assumes fair share of responsibilities
Professional Dispositions and Qualities		Professional Integrity	
X	Believe all children can learn	X	Displays high and ethical professional standards
X	Understands the culture of students and their families		Is honest and dependable
X	Values and respects diversity and individual differences	X	Is courteous and respectful
	Demonstrates flexibility and adaptability	X	Has a positive professional attitude
X	Treats all students fairly and equitably	X	Accepts and uses constructive criticism
X	Is sensitive to the feelings of others		Maintains emotional control and appropriate behavior
	Interacts appropriately and positively with others		

12. GENERAL REQUIREMENTS

Specific Course Requirements

1. Class attendance - See FSU Catalog under class attendance policy.

In addition to the University's policy on absenteeism, any unexcused absence above the allowable minimum will result in one (1) point being deducted from the student's final grade average. **Example:** Final grade average 92 = A; 3 unexcused absences = minus 3 points; 3 points deducted (92 - 3 = 89) = B grade.

Excused absences include **DOCUMENTED** emergencies, medical or otherwise; University service, i.e., athletics, band, choir, etc., or instructor's approval. **This policy includes all levels of classes (100 thru 400 level)**

2. Required reading from selected journals related to a health problem.

3. All assignments due on or before due date. No make-ups.

4. Oral presentation of your research study.

5. Search and examine web-sites related to community health intervention programs and services.

13. EVALUATION CRITERIA

The final grade in this course will reflect the average of class discussions, school observations, written reports, chapter tests, and class attendance.

A. Grade Distribution

ACTIVITIES

% OF GRADE

1. Examinations	70%
3. Report Project/Article critique	15%
4. Presentation	5%
5. Quizzes	5%
6. Class participation	5%

B. Grading Scale

92 - 100 = A
83 - 91 = B
73 - 82 = C
64 - 72 = D
Below 64 = F

14. COURSE OUTLINE WITH ASSIGNMENT SCHEDULE

SECTION I The Epidemiologic Approach to Disease and Intervention WEEK 1 - 5

An overview of Epidemiology	Chapter 1
Disease Transmission	Chapter 2
Measuring disease occurrence	Chapter 3
Assessing the quality of screening and diagnostic tests	Chapter 4
The natural history of disease	Chapter 5
Modifying the natural history of disease through trials	Chapters 6 & 7

SECTION II. Using Epidemiology to Identify the Cause of Disease WEEK 6 - 11

Basic study design	
Cohort studies	Chapter 8
Case control and cross-sectional studies	Chapter 9
Estimating disease risk	
Disease association with risk factors	Chapter 10
Measuring risk and potential for prevention	Chapter 11
Deriving and interpreting causal inferences	
Deriving disease association and causation from Epidemiological studies	Chapter 13
Bias, confounding and interaction of risk factors	Chapter 14
Roles of genetic and environmental factors in disease causation	Chapter 15

SECTION III. Applying Epidemiology to Evaluation and Policy WEEK 12 - 15

Using Epidemiology to evaluate health services	Chapter 16
Evaluating screening programs using Epidemiologic approach	Chapter 17
Using Epidemiology to formulate and evaluate public policy	Chapter 18
Ethical and professional issues in Epidemiology	Chapter 19

15. COURSE REQUIREMENTS:

1. Attend all classes ON TIME - see FSU catalog for class attendance policy.
2. Total class participation and meaningful contribution.
3. Critique at least five (5) original research articles of epidemiology
4. Complete and present a research project approved by the instructor.
5. Submit all assignment on or before due date (Minus1 point for each day past due date – including weekends).

16. TEACHING STRATEGIES

1. Lecture and discussion
2. Audio-visual aids
3. Reading and written assignments
4. Field trips/visiting consultants
5. Seminars
6. Research topics
7. Hands on computer competencies

17. DISABLED STUDENT SERVICES: In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability to please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); 910-672-1203.

18. REFERENCES

1. Neighbors, M., Tannehille-Jones, R.: Human Diseases. Thomson Learning 2000
2. Whitney, E. N. and Rolfes, S.R.: Understanding Nutrition. West Publishing Company, 10th Edition 2005.
3. Crooks, Robert and Baur, Karla.: Our Sexuality. Wadsworth Group, 8th edition, 2002
4. <http://www.cdc.gov>
5. <http://www.lessonplanspage.com/>
6. <http://www.nih.gov/>
7. American Health
8. Annual Editions – Nutrition
9. Nelson, K. & Williams, C.M.: Infectious Disease Epidemiology – Theory and Practice, 2nd edition. Jones and Bartlett Publishers, 2007.