COURSE OUTLINE

PRINCIPLES OF EPIDEMIOLOGY   CPH 111
Course Title   Dept. & Course No.

I. COURSE DESCRIPTION:

This course introduces the basic principles of epidemiology and its relevance to the identification, description and measurement of the distribution of disease and other health-related states and their determinants in the population.

II. SEMESTER CREDITS:3

III. CONTACT HOURS PERWEEK: Lecture: 3   Lab: 0   Total: 3

IV. PREREQUISITE:CPH 101

V. STUDENT LEARNING OUTCOMES: VI. COURSE CONTENTS:

Upon completion of this course the student will be able, with 65% level of accuracy, to:

1. Describe the nature and uses of Epidemiology

    A. Nature and uses of Epidemiology
        1. Epidemiology defined
        2. Epidemiology as an assessment, planning, monitoring and evaluation disciplinary tool in health
        3. The three "phases" of Epidemiology: descriptive, analytical, and experimental-evaluative.

2. Describe the contribution of Epidemiology to disease prevention and control.

    B. Epidemiology in disease prevention and control
        1. Surveillance for early case detection and prevention of spread of exposure/infection
        2. Investigation of outbreaks
        3. Evaluation of disease control and other, relevant interventions

3. Describe the role of Epidemiology in the evaluation of health care and public health interventions.

    C. The evaluative phase of Epidemiology
        1. Description of a local PHS system
        2. Analysis of its strengths and weaknesses
        3. Identification of possible ways to improve on it with practical activities, including training

4. Elaborate on research in health, including identification of study designs appropriate for different research questions/objectives

    D. The experimental phase of Epidemiology
        1. Identification of the research "question-objective"
        2. Selection of the appropriate study design
        3. Analysis and interpretation of data and results.

VII. EQUIPMENT AND MATERIALS:
1. Projector
2. Routine classroom materials
3. 1 USB storage device (at least 1 GB)—student-furnished

VIII. TEXT:
Text: Bonita R., Beaglehole R., Kjellstrom T. (2007) <u>Basic Epidemiology,</u> 2nd ed. or most recent edition. World Health Organization, Geneva. (ISBN-13: 978-9241547079)

IX. METHODS OF INSTRUCTION:
1. Lecture
2. Group work on practical classroom exercises
3. Questions and Answers (Discussion) and/or Guest Speakers

X. METHOD OF EVALUATION:
1. Description   Points

	Description	Points
a.	Class participation and assignments	25%
b.	Tests/Quizzes	25%
c.	Mid-term Exam	25%
d.	Final Exam	25%
	Total	100%

2. Transmutation of percent to letter grade

	Range	Grade
a.	90-100	A
b.	80-89	B
c.	70-79	C
d.	65-69	D
e.	0-64	F

During the course experience, the ***course learning outcomes*** (CLOs) will be assessed through the use of signature assignments. A rating scale will be used to determine the students' proficiency level of each CLO using specifically aligned assignments. The numerical ratings of 4, 3, 2 and 1 are not intended to represent the traditional school grading system of A, B, C, D and F. The descriptions associated with each of the numbers focus on the level of student performance for each of the course learning outcomes listed below.

Rating Scale: 4. Exceeds Expectations
                3. Meets Expectations
                2. Developing
                1. Below Expectations

CLO#1:Students will be able to describe the role of epidemiology in Public Health practice.

4	Perform all of the following tasks accurately and completely: • Define and describe epidemiology • Describe the role of epidemiological methods in identifying patterns of disease and injury in human populations. • Describe the role of epidemiology in the control of health problems • Describe the importance of epidemiology for informing scientific, ethical, economic, and political discussion of health issues
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.

CLO#2: Students will be able to describe the basic terminology and definitions of epidemiology.

4	Perform all of the following tasks accurately and completely: • Describe and discuss the terminology and definitions of epidemiology • Summarize the basic epidemiological measures • Discuss common statistical analysis methods in epidemiological data • Explain basic epidemiological information to lay and professional audiences
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.

CLO#3:Students will be able to describe designing and conducting methods for an outbreak investigation.

4	Perform all of the following tasks accurately and completely • Identify and develop a case definition based in person, place and time • Describe the background rate of a disease outbreak • Describe and formulate a hypothesis of disease causation • Describe methods to test a hypothesis of disease causation
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.

CLO#4:Students will be able to define and describe the roles of screening and surveillance systems in Public Health.

4	Perform all of the following tasks accurately and completely • Describe the purpose of screenings and surveillance systems • Explain measures of validity and the predictive values of a positive and negative test • Explain the different screening and surveillance programs • Discuss the epidemiological dimensions of the major causes of morbidity and mortality either regionally or internationally
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.

CLO#5:Students will be able to demonstrate proficiency in obtaining, evaluating, and interpreting public health information.

4	Perform all of the following tasks accurately and completely • Describe study designs used in a public health literature • Describe the role of bias in the interpretation of study results • Explain on the interpretation of statistical analysis found in public health studies • Discuss strengths and limitations of epidemiological reports
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.