هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications

Course Title:	**Epidemiology**
Course Code:	**NUR473-2**
Program:	**BACHELOR OF SCIENCE IN NURSING**
Department:	**Nursing department**
College:	**College of Nursing**
Institution:	**JAZAN UNIVERSITY**

Table of Contents

A. Course Identification

1. Credit hours: 2
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☑ Elective ☐
3. Level/year at which this course is offered: 4th year, Level 11
4. Pre-requisites for this course (if any)**:** **NONE**
5. Co-requisites for this course (if any)**:** **NONE**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	24 hours	%١٠٠
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	24 hours
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	24

B. Course Objectives and Learning Outcomes

1. Course Description

This course is required for all undergraduate nursing students to introduce the basic concepts of epidemiology and basic methods as applied to public health problems. Emphasis is placed on the principles and methods of epidemiologic investigation, displays of survey/surveillance data, and the use of epidemiological investigations to describe the disease in populations. This course explores various epidemiologic study designs for investigating the associations between risk factors and various disease outcomes and culminating with criteria for causal inferences. By epidemiological concepts students will understand the practice and importance of epidemiological investigation in the areas of health services, environment and public health policies.

2. Course Main Objective

- Understand the dynamic of disease epidemiology.
- Discuss the sources of epidemiological data.
- Understand the different methods in epidemiology to control and prevent occurrence of disease.
- Develop basic concepts and application of Epidemiology in the field of Nursing.
- Have analytical skills to collect, collate, analyze and interpret data and convert it into a piece of intelligence for necessary public health action.
- Investigate an epidemic and carryout need assessment and program implementation in the community setting.
- Design and execute simple research activities and surveys.
- Join the different levels of public health work force.
- Apply basic understanding of epidemiology to be able to pursue further studies and achieve academic excellence
- Developing a graduate who is aware about the potential emerging, re-emerging & threatening disease.
- Prepare a community – oriented nurses capable of implementing preventive and control measures for communicable diseases on the individual, family and community levels and within the primary health care settings following WHO policies and protocols.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Understand the components of disease epidemiology.	K1
1.2	Distinguish the sources of epidemiological data	K2
1.3	Recognize the different methods in epidemiology to control and prevent the occurrence of disease.	K3
2	**Skills :**	
2.1	Calculate commonly used health measures, such as relative risk, attributable risk, and odds ratio; select appropriate methods for estimating such measures	S1
2.2	Evaluate the quality and comparability of data.	S2
3	**Values:**	
3.1	Design and execute simple epidemiological research	V1
3.2	Formulate and apply epidemiologic methodology to identify a specific public health problem, develop a hypothesis, and design a study to investigate the issue.	V2

C. Course Content

Week No	List of Topics	Contact Hours
1	**Foundation of Epidemiology** Introduction and definition, Determinants of health Objective and scope of epidemiology	٢
٢	**Foundation of Epidemiology** Level and approaches of prevention for occurrence of diseases Epidemiology in clinical practice	٢
٣	**Disease Concepts in Epidemiology** Natural history of disease Epidemiological triad Modes of disease transmission Portal of entry, Chain of infection	٢
٤	**Disease Concepts in Epidemiology** Classification and spread of diseases Disease outbreak Precautions and types of control for communicable diseases	٢
٥	**Descriptive Epidemiology** Measuring of disease occurrence and frequency Measures of morbidity and mortality Measuring of disease occurrence and frequency	٢
6	**Clinical Epidemiology** Survey & surveillance Screening Evaluating the screening test	٢
٧	**Therapeutic Intervention** Relationship of exposure and outcome Causal interference and association Causal relationships, Factors and hierarchy of causes Causal interference, Steps and study design for judging causality	٢
٨	**Design Strategies and Statistical Methods in Analytic Epidemiology I** Experimental study designs Designing a randomized controlled trial Bias in studies design Strength and weakness of study	٢
٩	**Design Strategies and Statistical Methods in Analytic Epidemiology I** Cross sectional and ecological study design Strength and weakness of study Cohort study design	٢
١٠	**Design Strategies and Statistical Methods in Analytic Epidemiology II** Relative risk and p value Strength and weakness of study Odds ratio	Self study
١١	**Design Strategies and Statistical Methods in Analytic Epidemiology II** Case control study designs Strength and weakness of study	Self study
١٢	**Emerging and re-emerging diseases** Definitions, Contributing factors, International health regulations, Management of EID	Self study
١٣	**Final Exam**	
Total		٢٤

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	TeachingStrategies	AssessmentMethods
1.0	**Knowledge and Understanding**		
1.1	Understand the components of disease epidemiology.	1-Lectures. 2- Open discussion with students' 3-Assignments. 4-Case study	Direct: • MCQs. • Short essay. • Long essay. • Matching. Indirect: • Course evaluation survey ILO
1.2	Distinguish the sources of epidemiological data		
1.3	Recognize the different methods in epidemiology to control and prevent the occurrence of disease.		
2.0	**Skills**		
2.1	Calculate commonly used health measures, such as relative risk, attributable risk, and odds ratio; select appropriate methods for estimating such measures	Lectures Open discussion Role-plays. Brainstorming	Direct: MCQs Case study. Short assay Group discussion Indirect: Course evaluation survey ILO
2.2	Evaluate the quality and comparability of data.		
…			
3.0	**Values**		
3.1	Design and execute simple epidemiological research	• Videos Demonstrations • Role-playing. Group work	Direct: simple research or survey. Indirect: Course evaluation survey ILO
3.2	Formulate and apply epidemiologic methodology to identify and develop hypothesis for public health problems.		
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2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Attendance and participation	١-١٢	5%
٢	Short assessment (Quiz, oral evaluation, group project, group presentation, etc.)	٤-٦	10%
2	Midterm	٦-٨	25%
3	Individual assignment	٦-١١	10%
4	Final Exam	١٣	50%
5	Total		١٠٠%
6			
7			
8			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :
Consultation: 2 Hrs.
Academic advice: 2 Hrs.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Celentano, D. &Moyses, S. (2019). Gordis Epidemiology. Elsevier.
Essential References Materials	• Gordis, L. (2014). Epidemiology 5th edition. Elsevier Saunders. • Giesecke Johan. Modern Infectious Disease Epidemiology 2002, 2nd edition Oxford University Press • Gorbach SL, Bartlett JG, and Blacklow NR, editors. Infectious Diseases, 3rd edition. • Control of Communicable Disease Manual. 2008, 19th ed. • American Public Health Association – • Magnus M. Essentials in Infectious Disease Epidemiology. Jones and Bartlett Publishers 2008. – • Jones and Bartlett Publishers 2008. – • Principles of Epidemiology in Public Health Practice: An Introduction to Applied Epidemiology and Biostatistics (3rd edition). Atlanta, GA. Thomas JC and Weber DJ. Epidemiologic Methods for the Study of Infectious Diseases.Oxford University Press 2001.
Electronic Materials	National Institute of Allergy and Infectious Diseases (http://www3.niaid.nih.gov/) - Centers for Disease Control and Prevention (http://www.cdc.gov/) - World Health Organization (http://www.who.int/en/) - The National Library of Medicine: http://www.ncbi.nlm.nih.gov/sites/entrez - ERIC - The Journal of Infectious Diseases (http://www.journals.uchicago.edu/JID/home.html) - Clinical Infectious Diseases (http://www.journals.uchicago.edu/CID/home.html) - Emerging Infectious Diseases (http://www.cdc.gov/ncidod/eid/) - Morbidity & Mortality Weekly Report (http://www.cdc.gov/mmwr/)
Other Learning Materials	• Lecture notes • Computer programs for Epidemiologists. • - archive.biomedcentral.com/17425573/content/1/1/6 • - Statistical software for Epidemiology • - statpages.org/javasta2.html – • CDC Epidemiologic Case Studies – (Computer Based) www.cdc.gov/epicasestudies/download_computer.html

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Lecture rooms= 60 students**
Technology Resources (AV, data show, Smart Board, software, etc.)	• **Internet** • data show& Smart Board
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	• **Video recording apparatus and facility.** • **Magnetic teaching board.** • **PowerPoint/ transparency projector**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of Teaching	Program coordinator Course coordinator Students	• Students/teacher focus group • Students personal written reflections • Students teaching appraisal questionnaire
Achievement of course learning outcomes	Course coordinator Course instructor	ILO
Quality of learning resources	Program coordinator Quality Assurance	Annual report

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes,Quality oflearning resources, etc.)
Evaluators (Students,Faculty, Program Leaders,Peer Reviewer, Others (specify)
Assessment Methods(Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	