Course Specifications

Course Title:	EPIDEMIOLOGY
Course Code:	HLT 261
Program:	BACHELOR OF SCIENCE IN CLINICAL LABORATORY SCIENCE (BSCLS)
Department:	CLINICAL LABORATORY SCIENCE (CLS)
College:	COLLEGE OF APPLIED MEDICAL SCIENCES AL-DAWADMI
Institution:	SHAQRA UNIVERSITY

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A. Course Identification

1. Credit hours: (2+1) credit hours	

2. Course type

a. University ☐ College ☐ Department **X** Others ☐

b. Required **X** Elective ☐

3. Level/year at which this course is offered: Level six /third year

4. Pre-requisites for this course (if any)**:** None

5. Co-requisites for this course (if any)**:** Biostatistics STAT 106

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**		
2	**Blended**	30 hours	50%
3	**E-learning**		
4	**Distance learning**		
5	**Other**	30	50%

7. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1	**Lecture**	30 hours
2	**Laboratory/Studio**	30 hours
3	**Tutorial**	
4	**Others** (specify)	
	Total	60 hours

B. Course Objectives and Learning Outcomes

1. Course Description

This course introduces the basic concepts of epidemiology as applied to public
health problems. Emphasis is placed on the principles and methods of epidemiologic
investigation, appropriate summaries and displays of data, and the use of classical statistical
approaches to describe the health of populations

2. Course Main Objective

At the end of this course students are expected to:

1. Acquire knowledge about the nature of epidemiology and its uses in the health field
2. Identify the epidemiological methods in studying the causes of disease.
3. Identify the importance of epidemiology in disease prevention and a well-clinical practice.
4. Analyze the role of epidemiology in the evaluation of the effectiveness of health care and its competency.
5. Acquire the required skills for implementing the epidemiology basics and methods in the fields of disease prevention and health promotion
6. Understanding the distribution of health and diseases in the community.
7. Calculate and interpret basic statistical measures (Ratios, proportions, mortality, and morbidity

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Acquire knowledge about the nature of epidemiology and its uses in the health field and identify the epidemiological methods in studying causes of disease and Frequency measures used in epidemiology	K1
1.2	Analyze the role of epidemiology in the evaluation of the effectiveness of health care and its competency and Identify its in disease prevention and a well-clinical practice	K1
		K1
2	**Skills :**	
2.1	demonstrate skills in handling data and presenting quantitative results and how to choose appropriate designs for epidemiological studies	S1, S2
2.2	evaluate critically studies conducted by others (in terms of the question, the design, the method, how it was conducted and how it was analyzed and perform general and focused examination to health and epidemiology samples	S2, S3
		S4
		S4
3	**Values:**	
3.1	Use computers and other updated materials in their mode of teachings, Develop scientific language skills. Develop communication skills with others via websites or e-mail	V4
3.2	Use an online library and the internet in searching for literature papers related to the subject. Communicate with other students as well as other faculty members and deal with texts and images in the fashion of using PowerPoint	V1, V4
3.3		V2
3...		

C. Course Content

Week No	List of Topics (Theory)	Contact Hours
1	Introduction to epidemiology Definition and background. History of epidemiology. Uses and applications. Scope of epidemiology.	4
2	Measures of disease frequency Counts, prevalence, and Incidence Measures of association,2X2 tables Random error, Bias, confounding/Modifications	4

3	Surveillance Survey-Based Surveillance Systems Data collection	4	
4&5	Types of epidemiology studies Analytic epidemiological study Descriptive epidemiological study (person, time, and place).	8	
6	**First Midterm Exam**	2	
6&7	Experimental studies (principles ,types ,ethics Experimental studies (clinical Studies)	6	
8	Epidemiological aspects of infectious diseases Definition and levels of disease occurrence Agents of infectious diseases	4	
9&10	The Epidemiology Triangle Disease Transmission Concepts Modes of Disease Transmission Chain of Infection Other Models of Causation Levels of Prevention	8	
11	Field Epidemiology Conducting a field investigation Investigation of a Food-borne Illness Disease Clusters	4	
12	**Second Midterm Exam**	2	
12&13	Clinical Epidemiology Screening and Diagnosis Evaluating the Screening Test Health Outcomes Research	6	
14	Ethical issues in epidemiological research	4	
15	Case studies	4	
	Final Exam		
Total		60	

D. Teaching and Assessment

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

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Acquire knowledge about the nature of epidemiology and its uses in the health field and identify the epidemiological methods in studying causes of disease and Frequency measures used in epidemiology	(a)Interactive Lecture/Discussion (b) Report Back Session (c)Powerpoint /Multimedia Presentation	(a) Paper and Pencil Tests (b) Lab report (c) Final written examination at the end of the semester
1.2	Analyze the role of epidemiology in the evaluation of the effectiveness of health care and its competency and Identify its in		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	disease prevention and a well-clinical practice		
2.0			
2.1	demonstrate skills in handling data and presenting quantitative results and how to choose appropriate designs for epidemiological studies	a)Interactive Lecture /Discussion (b) Report Back Session (c) Powerpoint/Multimedia Presentation (f) Large Group Discussion (g) Reading (h) Online assignment / Assigned Homework	(a) Paper and Pencil Tests (b) Demonstration Pl (d) Lab report (g) Final wrote the examination at the end of the semester
2.2	evaluate critically studies conducted by others (in terms of the question, the design, the method, how it was conducted and how it was analyzed and perform general and focused examination to health and epidemiology samples		
3.0	**Values**		
3.1	Use computers and other updated materials in their mode of teachings, Develop scientific language skills. Develop communication skills with others via websites or e-mail	(a) Assignment (b) Internet search (c) Group dynamics (d) Online assignment/Assigned Homework (e) Small Project	(a) Journal(b) Portfolio (c) Group work (d) Oral examination (e) Evaluation of assignments and search work. (f) Observation of student ethical and moral behavior
3.2	Use an online library and internet in searching for literature papers related to the subject. Communicate with other students as well as other faculty members and deal with texts and images in the fashion of using PowerPoint		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	1st Midterm Test	6th week	15%
2	2nd Midterm Test	12th week	15%
3	Attendance & Quizzes	1-15 weeks	05%
4	Online assignment & Presentation	7th and 12th week	05%
5	Practical midterm& activities	6th/12th	20%
6	Final Exam		40%
7	Total		100%

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

E. Student Academic Counseling and Support

Arrangements for the availability of faculty and teaching staff for individual student consultations and academic advice :
1. All the Teaching Staff are available to assist and support the students if they have any questions or inquiries. From the start, they were given the schedule of their lectures, tutorials, clinical session for the whole semester.   (a) Office hours (4 hours / week / staff)   (b) Regular meeting with the course organizer and the team leader.   (c) Course 3 hours per day, 5 days a week for any inquiry and support for the students

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	❖ Merrill., R. M. (n.d.). Introduction to epidemiology (Seventh edition ed.). The United States of America: Publisher: Jones & Bartlett Learning www.jblearning.com. DOI:ISBN :978-1-284-09435-0 (Pbk.) ❖ BOVBJERG, M. L., & JOHNSON, K. (2019). *Foundations of Epidemiology*. CORVALLIS, OR-, USA: OREGON STATE UNIVERSITY
Essential References Materials	
Electronic Materials	www.epimonitor.net, www.cidrap.umn.edu, www.jech.bmjjournals.com
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	❖ Classrooms ready and equipped with educational media ❖ Lecture rooms are air-conditioned with at least 35 seats ❖ Labs equipped with material for teaching ❖ LCD projectors are available in the lecture rooms ❖ SmartBoard available in the lecture rooms ❖ Laptop and desktop computers ❖ Central printer and scanner Up-to-date scientific books in the library

Item	Resources
Technology Resources (AV, data show, Smart Board, software, etc.)	❖ LCD Projector ❖ SmartBoard ❖ Internet (Wifi) connection in the lecture and laboratory rooms Desktop computer and microphone in lecture rooms
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements, or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Regular evaluation of the theoretical and practical parts of the course to identify the weaknesses areas	Teaching staff	course report
Confidential completion of a standard course evaluation questionnaire	Students	Course Evaluation Template
Regular annual evaluation of the program	Head of the Department Quality Committee	Annual program report

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

H. Specification Approval Data

Council / Committee	Department of Clinical Laboratory Science Council
Reference No.	2/1442
Date	11/01/2021