BMS4002: PUBLIC HEALTH AND EMERGING INFECTIOUS DISEASES

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Public Health and Emerging Infectious Diseases

Subject Code
BMS - Biomedical Sciences
Course Number
4002

Academic Unit
Biomedical Sciences (BMS)

College/School
College of Biomedicine (BD)

Course Duration
One Semester

Credit Units
3

Level
B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
(i) BMS2001 Medical Microbiology; (ii) BMS2201 Molecular Biology of Cell
- The above-mentioned prerequisites are waived for BMS-major students who are admitted from advanced standing II.
- For 2016 and 2017 FYFD intake students, they are required to meet the pre-requisite requirement (i) only.
- For 2018 and thereafter FYFD intake students, they are required to meet the pre-requisite requirement (i) and (ii).

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract

This course aims to introduce the students the concepts and knowledge of public health, including health, disease, measurement, risk factor, social behavioral, prevention, surveillance and public policies. Students will learn and discuss related infectious diseases in the public health context. This will enable students to assess and rank different types of environmental risks and examine various control prevention strategies such as HIV/AIDS transmission, influenza/Zika/SARS transmission among human beings and different animals, food additives and toxin related to human diseases.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Discuss the concepts of public health and related infectious diseases through series of lectures and tutorials.		x	x	
2	Evaluate different control prevention tactics and their effectiveness through demonstration and case studies.			x	
3	Criticize the public health cases/infectious diseases, and analyse the results and conclusions from journals and articles			x	
4	Demonstrate control practice and the interpretation of results generated through questions			x	x

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	Lectures deliver subject-specific knowledge	1, 2, 3, 4	2 hours
2	Presentation/discussion	Group/individual Presentation/discussion	1, 2, 3, 4	1 hour

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Quiz	1, 2, 3	20	A Quiz will be conducted in week 8 or 9.	No

2	Presentation report	1, 2, 3, 4	15	Each student will present on selected topics or research articles. Class Participation and in-class discussion 30%; Presentation 70%	Yes
3	Class Participation and in-class discussion	1, 3	5	-	Yes
4	Homework	2, 3, 4	10	-	Yes

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

3

Minimum Continuous Assessment Passing Requirement (%)

40

Minimum Examination Passing Requirement (%)

40

Additional Information for ATs

Minimum Passing Requirement: A minimum of 40% in continuous assessment as well as in examination.

Assessment Rubrics (AR)

Assessment Task

1. Quiz

Criterion

Quiz score will be used to verify the state of students' learning progress

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task
2. Group Presentation

Criterion
Challenges students to collaborate, communicate and work together to solve problems

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal levels

Assessment Task
3. Class Participation and in-class discussion

Criterion
Challenges students to actively participate and discuss to solve problems that evaluate their performance and knowledge learnt.

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal levels

Assessment Task
4. Homework

Criterion
To master and apply the knowledge to solve problems occurring in public health and infectious diseases practice.

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal levels

Assessment Task
5. Final Exam

Criterion
To test students' application of material taught in class and evaluate their performance based on their performance on the exam

Excellent (A+, A, A-)
High

Good (B+, B, B-)
Significant

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

- Public Health
- Population
- Diseases and risk factors
- Pathogens
- Infectious diseases
- Transmissible diseases
- Symptoms of diseases
- Pathogenic biological agents
- Virus, bacteria, nematodes
- Anti-infective treatments
- Epidemiology

Reading List

Compulsory Readings

	Title
1	Introduction to Public Health By Mary-Jane Schneider The 3rd edition (text book for public health)
2	Infectious Disease Epidemiology: Theory and Practice. Nelson KE, Williams CFM (eds). 3rd ed, Burington, MA: Jones & Bartlett Learning. 2014; ISBN-13: 978-1449683795. (text book for infectious disease)

Additional Readings

	Title
1	National Institute of Allergy and Infectious Diseases. Understanding Vaccines. http://www.niaid.nih.gov/topics/vaccines/Pages/Default.aspx
2	Centers for Disease Control and Prevention -Emerging Infectious Diseases journalhttp://wwwnc.cdc.gov/eid/
3	David. L Heymann (ed). Control of communicable diseases manual. 19th edition. Washington DC: American Public Health Association, 2008.
4	AFMC Primer on Population Health http://phprimer.afmc.ca/ (free ebook)