

# BMS5002: INFECTIOUS DISEASE MANAGEMENT

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## Effective Term

Semester B 2024/25

## Part I Course Overview

### Course Title

Infectious Disease Management

### Subject Code

BMS - Biomedical Sciences

### Course Number

5002

### Academic Unit

Biomedical Sciences (BMS)

### College/School

College of Biomedicine (BD)

### Course Duration

One Semester

### Credit Units

3

### Level

P5, P6 - Postgraduate Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

Nil

### Precursors

Nil

### Equivalent Courses

Nil

### Exclusive Courses

Nil

## Part II Course Details

### Abstract

The course aims to provide students the principles and practice on the diagnosis, control and prevention of infectious diseases. Topics including (1) disease principle, diagnosis and detection; (2) epidemiology principles, outbreak, dynamics,

molecular epidemiology; (3) disease management principles (I): nutrition, hospital infection, antibiotic resistance; (4) disease management principles (II): prevention of disease spread, vaccinology; (5) disease management principles (III): therapeutics, emergency responses to emerging diseases; (6) disease management principles (IV): public health policy, biosecurity threats; (7) Topic I: management of diseases with airborne transmission (e.g., COVID-19); (8) Topic II: management of diseases with fecal-oral transmission and body fluid transmission; (9) topic III: management of diseases with vector-borne transmission. In all topics, special attention will be paid on how communicable diseases and their control affects the public health locally, nationally and internationally.

### Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Understand biological concepts that are relevant to infectious diseases, and basic principles of infectious disease epidemiology such as outbreak investigation, disease surveillance.	40	x	x	
2	Understand the major infectious disease and various modes of transmission of infectious disease agents recognize the properties of different types of pathogens and the mechanisms of pathogenesis and the principles of healthcare management in infectious diseases.	30	x	x	x
3	Understand the control and evaluation strategies for infectious diseases develop management skills of infectious diseases and social responsibility, apply specialized knowledge in the care of infectious diseases via critical thinking	30		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	Lecture introduction on course content	1, 2, 3
2	Tutorial	To give oral presentation on a certain topic for case study	1, 2, 3

### Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Oral presentation	1, 2, 3	15	
2	Group debating	1, 2, 3	20	Assigned topics on Infection and management: Quality of contents 40%, Communication skills 30%, organization 10%, methods of presentation 10%, question handling 10%
3	Research essay	1, 2, 3	30	Title/Topic 5%; Abstract 10%, Quality of content 60%, Writing skill 15%, Reference 10%

**Continuous Assessment (%)**

65

**Examination (%)**

35

**Examination Duration (Hours)**

3

**Assessment Rubrics (AR)****Assessment Task**

Oral Presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

**Criterion**

Ability to analyse and criticise the infectious disease management

**Excellent**

(A+, A, A-) Outstanding performance on all CILOs. Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

**Good**

(B+, B, B-) Substantial performance on all CILOS. Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.

**Fair**

(C+, C, C-) Satisfactory performance on the majority of CILOS possibly with a few weaknesses. Being able to profit from the course experience; understanding of the subject; ability to develop solutions to simple problems in the material.

**Marginal**

(D) Barely satisfactory performance on a number of CILOS. Sufficient familiarity with the subject matter to enable the student to progress without repeating the course.

**Failure**

(F) Unsatisfactory performance on a number of CILOS. Failure to meet specified assessment requirements, little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited or irrelevant use of literature.

### **Assessment Task**

Group debating (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

#### **Criterion**

Ability to analyse and criticise a special issue on an infectious disease and related management, Self-motivated learning; Skills to design and address a policy through multiple aspects.

#### **Excellent**

(A+, A, A-) Outstanding performance on all CILOs. Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

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### **Assessment Task**

Research essay (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

#### **Criterion**

Ability to identify important topics/issues to be solved in infections and related disease management; Ability of critical thinking as well as obtaining, organising important data to address the topics and writing skills.

#### **Excellent**

(A+, A, A-) Outstanding performance on all CILOs. Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

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### **Assessment Task**

Examination (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

#### **Criterion**

Ability to analyse, state and apply the principles and subject matter learnt in the course

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### **Assessment Task**

Oral Presentation (for students admitted from Semester A 2022/23 to Summer Term 2024)

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**Part III Other Information****Keyword Syllabus**

Principles of infectious diseases,  
 Outbreak investigation,  
 Disease surveillance,  
 Zoonotic diseases,  
 Vector-borne diseases,  
 Antibiotic resistance,  
 Vaccinology and therapeutics,  
 Public health policy,  
 Emergency responses to emerging diseases,  
 Biosecurity threats

**Reading List****Compulsory Readings**

Title	
1	Nil

**Additional Readings**

Title	
1	"Infectious Disease Epidemiology", Third Edition, edited by Kenrad Nelson and Carolyn Williams. Jones and Bartlett, 2014.
2	"Basic infection control for health care providers", Second Edition, Clifton Park, NY: Thomson Delmar Learning, M. Kenamer, 2007.