BMS2008B: HEMATOLOGY I

Effective Term
Semester A 2024/25

Part I Course Overview

Course Title
Hematology I

Subject Code
BMS - Biomedical Sciences
Course Number
2008B

Academic Unit
Biomedical Sciences (BMS)

College/School
Jockey Club College of Veterinary Medicine and Life Sciences (VM)

Course Duration
One Semester

Credit Units
2

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

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Additional Information
Note: BMS2008B does not contain any practical component, and has a credit unit value of 2.

Part II Course Details

Abstract

This course integrates advanced theory of hemotology, including normal erythropoiesis, thrombosis and leucocyte, practical application, technical performance and evaluation of hematological and procedures. Students will learn how to identify various types of blood cells and develop ability in hematological techniques conducted in hematology laboratories, including blood collection procedures, complete blood count, blood grouping, blood films, differential count, and staining methods for microscopy.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Demonstrate a working knowledge of the theories and techniques utilized in standard laboratory procedures performed in Hematology		x		
2	Differentiate various hematological procedures and the use of basic equipment required to working in Clinical Hematology Laboratory			x	
3	Evaluate test results with normal abnormal physiologic circumstances			x	
4	Identify the various components of blood, their functions, and roles in normal states			x	
5	Develop the ability to communicate with medical laboratory specialists			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 and tutorials		1, 2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Exercises	1, 2, 3, 4, 5	40	

Continuous Assessment (%)

40

Examination (%)
60

Examination Duration (Hours)
2-3

Additional Information for ATs
Minimum Passing Requirement: A minimum of 40% in both coursework and examination.

Assessment Rubrics (AR)

Assessment Task
1. Exercises

Criterion
Demonstrate the ability to apply what has been taught in lectures/tutorials into 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
2. Final Examination

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

- Hematopoiesis
  (Origin of erythrocytes, leukocytes and platelets Cell maturation processes)
- Routine Hematology Testing
  (CBC parameters (WBC, RBC, HGB, HCT, RBC Indices, PLT)
- Erythrocytes
- Leukocytes
- Platelets
- Special Hematology Testing
- Molecular diagnosis methods and practical skills

Reading List

Compulsory Readings

	Title
1	McKenzie, Shirlyn B., Clinical Laboratory Hematology, Second Edition, Pearson Education, ISBN 0-13-513732-2
2	Rodak, B.F., Fritsma, G.A. & Keohane, E. (2011) Hematology: Clinical principles and applications (4th ed.), Elsevier Saunders.
3	Rodak, B.F. & Carr, J.H. (2012) Clinical Hematology Atlas (4th ed.), Elsevier Saunders.
4	Sir John V. Dace & SM Lewwis, Practical Hematology, ISBN: 0 443019819
5	Bunn, F.H. (2011) Pathophysiology of blood disorders, McGraw-Hill Medical. [e-book]
6	Rozenberg, G. (2011) Microscopic haematology (3rd ed.), Elsevier Saunders.Smith, G. (2010) Problem solving in haematology, Oxford Clinical Publishing. [e-book]

Additional Readings

	Title
1	American Journal of Haematology