

BMS3011B: HEMATOLOGY II

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Hematology II

Subject Code

BMS - Biomedical Sciences

Course Number

3011B

Academic Unit

Biomedical Sciences (BMS)

College/School

College of Biomedicine (BD)

Course Duration

One Semester

Credit Units

2

Level

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

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

BMS2008 Hematology I (BMS2008B Hematology I)

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

BMS3001 Hematology

Additional Information

Note: BMS3011B 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 abnormal hematology, including abnormal erythropoiesis, thrombosis and leucocyte, practical application, technical performance and evaluation of hematological and procedures. Overview of various topics in blood disorders associated with pregnancy, autoimmune haemolytic anaemia will also be discussed. Students will learn how to identify various types of abnormal blood cells and develop ability in hematological techniques used for blood disease diagnosis, including flow cytometry, leucocyte differentiation count for abnormal blood samples, abnormal leucocyte identification and so on.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if DEC-A1 app.)		
		DEC-A1	DEC-A2	DEC-A3
1	Differentiate various hematological procedures and the use of basic equipment required to work with abnormal hematology samples		x	
2	Evaluate the validity of test results by correlating interfering substances, QC results, test conditions and specimen integrity		x	
3	Evaluate test results with abnormal physiologic circumstances		x	
4	Identify the various components of blood, their functions, and roles in various disease states		x	
5	Recognize OSHA safety regulations for blood borne pathogens.		x	
6	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, 6	

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks ("- " for nil entry)	Allow Use of GenAI?	
1	Exercises	1, 2, 3, 4, 5, 6	40	-	No

Continuous Assessment (%)

40

Examination (%)

60

Examination Duration (Hours)

2-3

Minimum Continuous Assessment Passing Requirement (%)

40

Minimum Examination Passing Requirement (%)

40

Additional Information for ATs

Minimum Passing Requirement: A minimum of 40% in both continuous assessment 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**

- Abnormal Hematopoiesis
(abnormal maturation of erythrocytes, leukocytes and platelets)
- Routine Hematology Testing in disease conditions
(CBC parameters (WBC, RBC, HGB, HCT, RBC Indices, PLT))
- Abnormal erythrocytes
- Abnormal leukocytes
- Abnormal platelets
- Special Hematology Testing used in hematology diseases
- Molecular diagnosis methods and practical skills in hematology diseases

Reading List**Compulsory Readings**

Title	
1	A. Victor Hoffbrand, Paul A. H. Moss. (2024) Hoffbrand's Essential Haematology, 9th Edition. Wiley-Blackwell.
2	Rodak, B.F., Fritsma, G.A. & Keohane, E. (2020) Hematology: Clinical principles and applications, 6th Edition. Elsevier Saunders.
3	Rodak, B.F. & Carr, J.H. (2020) Clinical Hematology Atlas, 6th Edition. Elsevier Saunders. eBook ISBN: 9780323778015
4	Barbara J. Bain, Imelda Bates and Michael A. Laffan, (2017) Dacie and Lewis Practical Haematology, 12th Edition. Elsevier Saunders.
5	McKenzie, Shirlyn B. (2020) Clinical Laboratory Hematology, 4th Edition. Pearson Education, ISBN-13: 9780134709369.
6	Jon C. Aster & H. Franklin Bunn. (2016) Pathophysiology of Blood Disorders, 2nd Edition. McGraw Hill.

Additional Readings

Title	
1	British Journal of Haematology
2	Blood - American Society of Haematology