

Branch Name:	B.Sc. Biotechnology
Program Code:	SC101
Course Name:	Haematology
Course Code:	2SC1010621
Pre-requisite Course:	

Course Objectives:

1. The course is designed to acquire basic knowledge of Blood components.
2. This will enable the student to understand basics of blood transfusion.
3. This course is designed to enable students in understanding the basics and applications of Blood grouping.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
2	--	--	2	35	15	--	--	50

Subject Contents:

Sr. No	Topic	Total Hours	Weightage (%)
1	Blood parts: Plasma and serum, Red blood cells, White blood cells, Platelets Haemoglobinometry Red blood cell count Red cell indices Blood film preparation and staining Red blood cell morphology in health and disease Erythrocyte sedimentation rate (ESR) Total white blood cell count White blood cell differential count and white blood cell morphology	15	50%
2	Anticoagulants Blood Coagulation Collection: venous blood & capillary blood , Storage and transfusion of blood Blood grouping Minor and Major cross matching Blood Transfusion Reactions Erythroblastosis Foetalis	15	50%

Text Books:

Mirza Sara Beg (2022) The Text Book of Hematology & Blood Banking, 1st Edition, Dviip Publication.

Reference Books:

Baker, F., Silverton, R.R. Pallister C..T. (1998) Baker and Silverton's Introduction to Medical Laboratory Technology. (7th edn.) Butterworths. Heinemann. Oxford. UK

List of Open Source Software/learning website:

https://www.youtube.com/watch?v=0hBTK8_B7xA

https://www.youtube.com/watch?v=VG_Y_KqXcVYQ

<https://www.nhs.uk/how-you-can-help/get-involved/download-digital-materials/blood-donation-videos/>

<https://www.bbguy.org/education/videos/>

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Student will be able to understand the components of Blood.	2 Understanding
CLO2	List out different types of blood cells.	1 Remembering
CLO3	Understanding the mechanism of ESR.	2 Understanding
CLO4	Learn basic techniques to identify and interpret red blood indices.	3 Applying, 2 Understanding
CLO5	Learn about leucocytes, evaluate diseases associated with them, identify and compare the increase and decrease of WBC in the body.	5,3, 4 Evaluate, Applying, Analyze
CLO6	Acquire fundamentals and translate the knowledge that will enable them to understand different blood grouping tests for transfusion.	6 Creating

Mapping of CLOs with Pos & PSOs

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CLO1	H		L	H	M	M	L			M	L	H	M	M	
CLO2	M	H		M	M	L	M	H	M		M	L	M	M	L
CLO3		M	M			M	L	H	L	H		H			M
CLO4	H		H	M		M	H	M	H		M	L	H	L	L
CLO5	M	M		L	H	M	M		M	M		M	M		M
CLO6	M		M		M	L		M	M		M		L	M	M

H:High, M:Medium, L:Low