

## SKILL BASED SUBJECT II

### CLINICAL PATHOLOGY & HEMATOLOGY

Semester	Subject code	Category	Lecture		Theory		Practical		Credit
			Total hrs	Hrs/week	Total hrs	Hrs / week	Total hrs	Hrs/week	
IV		Skill based	30	2	30	2	0	0	2

#### COURSE OUTCOMES

To enable the students to understand the concepts of Laboratory techniques in diagnosis

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On the successful completion of the course, students will be able to develop strong and potential skills to work in the clinical laboratories.

CO Number	CO Statement	Knowledge Level (K1-K4)
<b>CO1</b>	To apply appropriate microbiology laboratory techniques for the examination of blood and urine	<b>K3</b>
<b>CO2</b>	To apply appropriate microbiology laboratory techniques for the examination of body fluids	<b>K2</b>
<b>CO3</b>	To understand Haematology	<b>K2</b>
<b>CO4</b>	To understand the blood counts	<b>K2</b>
<b>CO5</b>	To understand the salient features of blood disorders	<b>K3</b>

## MAPPING WITH PROGRAMME OUTCOMES:

<b>COS</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>
<b>CO1</b>	S	S	M	S	M	M
<b>CO2</b>	S	S	M	M	M	M
<b>CO3</b>	S	S	S	S	M	M
<b>CO4</b>	S	M	S	S	S	S
<b>CO5</b>	S	S	S	S	S	S

**S- Strong;**

**M- Medium;**

**L- Low**

### **Unit I: Examination of blood and urine**

**6 hrs**

Collection and Preservation of blood and urine. Microscopic examination of urine, crystals, uric acids, amorphous urates, cystine, crystalline urates, phosphates, calcium carbonates, microbes.

### **Unit II: Examination of body fluids**

**6 hrs**

Examination of miscellaneous body fluids, CSF, Serous fluid, Synovial fluid. Gastric juice.

### **Unit III: Hematology**

**6 hrs**

Components of blood & their function. Routine hematological tests – Bleeding time, Clotting time, Determination of Hemoglobin concentration, Haematocrit value.

### **Unit IV: Blood count**

**6 hrs**

PCV, ESR, Differential leukocyte count, RBC, WBC count

### **Unit V: Blood Disorders**

**6 hrs**

Blood coagulations Mechanism, Fibrinolysis, Collection & Processing of blood for transfusion. Anemia's, leukemia's. Miscellaneous disorders.

**DISTRIBUTION OF MARKS:** Theory - 100% and Problems – Nil

**TEACHING METHODOLOGY:**

- ❖ Lectures
- ❖ Power point presentation
- ❖ Charts
- ❖ Models
- ❖ Group discussion
- ❖ Group assignments

**TEXT BOOKS:**

S.N o	Authors	Title	Publishers	Year Of Publication
1.	Kanai L. Mukherjee	Medical Labty Technology	Tata McGraw- Hill	2017

**WEB REFERENCE:**

<https://www.khanacademy.org/science/health-and-medicine/human-anatomy-and-physiology>  
<https://www.slideshare.net/dryuktisharma/chapter-1-introduction-to-anatomy-and-physiology>  
[https://en.wikipedia.org/wiki/List\\_of\\_systems\\_of\\_the\\_human\\_body](https://en.wikipedia.org/wiki/List_of_systems_of_the_human_body)  
<https://study.com/academy/lesson/what-are-the-organ-systems-of-the-human-body.html>  
[https://en.wikipedia.org/wiki/Medical\\_laboratory](https://en.wikipedia.org/wiki/Medical_laboratory)

**SYLLABUS DESIGNER:**

1. Dr. A.Vidhya, Assistant Professor and Head