

SKILL BASED SUBJECT I

MEDICAL LABORATORY TECHNOLOGY

GENERAL PRINCIPLES OF LABORATORY, ANATOMY & PHYSIOLOGY

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

COURSE OUTCOMES

To enable the students to understand the basic techniques in Medical laboratory and the anatomy of human.

COURSE OUTCOMES

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)
CO1	To understand the basic needs of a clinical laboratory and the records maintained in the laboratory.	K3
CO2	To understand the lab accidents and first aid.	K2
CO3	To understand the anatomy and physiology of Skeletal system, Muscular system, Circulatory system, Endocrine System	K2
CO4	To understand the anatomy and physiology of	K2

	Lymphatic system, Digestive system, Respiratory system, Urinary system.	
CO5	To understand the anatomy and physiology of Reproductive system, sense organs, Nervous system. Skin & its appendages	K3

MAPPING WITH PROGRAMME OUTCOMES:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	M	S	M	M
CO2	S	S	M	M	M	M
CO3	S	S	S	S	M	M
CO4	S	M	S	S	S	S
CO5	S	S	S	S	S	S

S- Strong;

M- Medium;

L- Low

Unit I: Components of clinical laboratories

6 hrs

Functional components of clinical laboratories – Basic needs of a clinical laboratory – Maintenance of laboratory records.

Unit II: Lab accidents and first aid

6 hrs

Common types of laboratory accidents – Basic cause and first aid in laboratories – Safety regulation in health laboratories.

Unit III: Anatomy and Physiology

6 hrs

Anatomy and Physiology – Skeletal system, Muscular system, Circulatory system, Endocrine System.

Unit IV: Anatomy and Physiology

6 hrs

Digestive system, Respiratory system, Urinary system.

Unit V: Anatomy and Physiology**6 hrs**

Reproductive organ & system, sense organs, Nervous system. Skin & its appendages

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

TEACHING METHODOLOGY:

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

TEXT BOOKS:

S.No	Authors	Title	Publishers	Year Of Publication
1.	Kanai L. Mukherjee, Anuradha Chakravarthy Ross and Willson	Medical Laboratory Technology, Procedure Manual for Routine Diagnostic Tests	McGraw- Hill Medical	2017
2.	Joseph Robert McClintic	Basic Anatomy and Physiology of human body	John Wiley & Sons, Inc.	1980
3.	Robert K. Clark	Anatomy and Physiology: Understanding the human body	Jones and Bartlett Learning	2005

REFERENCE BOOKS:

S.No	Authors	Title	Publishers	Year Of Publication
1.	Jenkins, Gail W,	Anatomy and	3 rd Edition	2012

	Kemnitz, Christopher P. Tortora, Gerard J	physiology:from science to life	John Willey & Sons	
2.	Marieb, Elaine Nicpon	Essentials of Human Anatomy and Physiology	9 th Edition Pearson	2016
3.	Frank Firkin, C. Chesterman, D. Penington, B. Rush	de Gruchy's Clinical Haematology in Medical Practice	Wiley-Blackwell	1989
4.	Ramniksood	Medical Laboratory Technology	6 th Edition JAYPEE	2009
5.	William. F.Ganong Barrett (Author)	Review of Medical physiology	McGraw- Hill Medical	2019
6.	Guyton	Human Physiology and Mechanisms of Disease	Saunders Publications	1996

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://study.com/academy/lesson/what-are-the-organ-systems-of-the-human-body.html>

https://en.wikipedia.org/wiki/Medical_laboratory

SYLLABUS DESIGNER

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