

NON MAJOR II

DIAGNOSTIC BIOCHEMISTRY II

Sem	Subject Code	Category	Lecture		Theory		Practical		Credit
			Hrs/ week	Hrs/ sem.	Hrs/ week	Hrs/ sem.	Hrs/ week	Hrs/ sem.	
IV	21NBC4A	Non Major	2	30	2	30	-	-	2

COURSE OBJECTIVE:

- To enable the fundamental biochemistry knowledge related to health, the clinical significance of the laboratory tests.
- To evaluate the abnormalities which commonly occur in the clinical field,
- To create awareness of different lifestyle diseases increasingly found in present day

COURSE OUTCOME:

On the successful completion of the course, students will be able to-

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	To have the basic knowledge about amino acid and Nucleic acid metabolism	K1
CO2	To understand the importance of Diagnostic enzymes	K2
CO3	To learn the basis of Lipid metabolism	K3
CO4	To describe the basis of protein metabolism	K3
CO5	From this unit we can obtain the knowledge about the Organ function test	K4

(*CO-Course Outcome

Knowledge Level: K1-Remember; K2-Understand; K3-Apply; K4-Analyze)

MAPPING WITH PROGRAMME OUTCOMES:

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

(S- Strong; M-Medium; L-Low)

Total Hours: 30

UNIT-I

Inborn error of metabolism.

5 Hours

Inborn errors of metabolism -Galactosemia, Phenyl ketonuria, Albinism, Niemannpick disease, Down's syndrome.

UNIT-II

Diagnostic Enzymes

6 Hours

Plasma enzymes in diagnosis - Functional and non functional plasma enzymes - Isoenzymes.Myocardial Infarction, acute pancreatitis.

UNIT-III

Disorder of Lipid metabolism

7 Hours

Cholesterol - Normal Level, Hypo and Hyperchlosterolemia. - Factor affecting blood Cholesterol -Atherosclerosis, Risk factors and Fatty liver.

UNIT-IV

6 Hours

Disorder of Protein metabolism

Protein Deficiency diseases-Kwashiorkor and Marasmus- Anemia - classification. Sickle cell anemia and Thalassemia.

UNIT-V

Clinical endocrinology

6 Hours

Hormones - Definition, types of hormones, Pathophysiology of thyroid hormone, Insulin, growth hormone, androgen and estrogen.

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

TEACHING METHODOLOGY:

- Black Board
- Power Point Presentations
- Assignments

- Models
- Demonstrations

TEXT BOOKS:

S.NO.	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1.	M.N.Chaterjee	Text book of medical Biochemistry	Jaypee Brothers Medical Publishers (P) Ltd	8 th 2012

REFERENCE BOOKS:

S. NO.	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1.	Hoffmann.W.S	Clinical Biochemistry	Year Book Medical Publishers	4 th edition(1970)
2.	A.C.Deb	Fundamentals of Biochemistry	New Central Book Agency	7 th edition(2006)
3.	K.Wilson and I.Walker	Practical Biochemistry	Cambridge University press	5 th edition(2000)
4.	S.K.Sawhney	Introductory Practical Biochemistry	Alpha Science International, Ltd	2 nd edition(2005)
5.	Tietz	Fundamentals of Clinical chemistry	C.A.Burtis, E.R.Ash wood(eds),Saunders WB Co	5 th edition

WEB SOURCES:

- www.slideshare.net/mohdlulu/inborn-errors-of-metabolism-12736523
- <http://chemistry.elmhurst.edu/vchembook/641serumenzymes.html>
- www.britannica.com/science/metabolic-disease/Disorders-of-lipid-metabolism
- www.britannica.com/science/hormone

SYLLABUS DESIGNER:

- Dr. B. Hebsibah Elsie, Assistant Professor of Bio-Chemistry.
- Mrs.G. Nithya, Assistant Professor of Bio-Chemistry.