(Master of Science –Home Science) (Foods and Nutrition)
(M.Sc.-H.Sc.) (Foods and Nutrition) Semester (II)

Course Code	PH02CFDN52	Title of the Course	Nutritional Biochemistry
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	1. Augment the biochemistry knowledge acquired at the postgraduate level 2. Understand the amino acid metabolism 3. Get an insight into molecular biology 4. Understand integration of cellular level metabolic events to nutritional disorders and imbalances

Course Content		
Unit	Description	Weightage (%)
1.	Metabolism of amino acids	25
2.	Nucleic acids: Chemistry, biosynthesis, DNA structure and organization, RNA	20
3.	DNA replication, Transcription and Translation	25
4.	Hormones and Biosignaling	20
5.	Detoxification and biotransformation of Xenobiotics	10

Teaching-Learning Methodology	Classroom lectures (Blackboard/Power Point Presentations), Discussion on recent updates with related examples

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to understand	
1.	The details of amino acid metabolism.
2.	The biosynthesis and metabolism of nucleic acid, DNA and RNA types and structure.
3.	The DNA replication, transcription and translation.
4.	The metabolic functions of hormones
5.	The detoxification process in body.

Suggested References:

Sr. No.	References
1.	Wu, G., (2019). *Amino Acids (Biochemistry and Nutrition).*Boca Raton: CRC Press Taylor and Francis Group.
2.	Ferrier.,D.R. (2019). *Lippincott Illustrated Reviews Biochemistry* (7th Edition). Philadelphia, PA., Wolters Kluwer.
3.	Vasudevan, D.M., S. Sreekumari., Vaidyanathan, K., (2016). *Textbook of Biochemistry for Medical Students 8th Edition*. New Delhi: Jaypee BrothersMedical publishers (P) Ltd.
4.	Naik.P. (2017). *Essentials of Biochemistry* (2nd edition*).* New Delhi: Jaypee BrothersMedical publishers (P) Ltd.
5.	Brown,T.A., Mukhopadhyay, S.N. (2018). *Biochemistry*. Banbury,UK: Viva Books Private Limited.
6.	Nelson, David L., Cox, Michael M. *Lehninger Principles of Biochemistry* (6th Edition). New York: W.H. Freeman and Company.

On-line resources to be used if available as reference material
On-line Resources
https://epgp.inflibnet.ac.in

****