



SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25))
Syllabus with effect from the Academic Year 2021-2022

P.G.Diploma in Dietetics
Semester-I

Course Code	PH1CPGDD51	Title of the Course	Basic Biochemistry
Total Credits of the Course	04	Hours per Week	04

Course Objectives	<ul style="list-style-type: none">• Augment the knowledge of biochemistry acquired at the undergraduate level.• Understand the mechanisms adopted by the human body for regulation of metabolic pathways.• Develop an insight into interrelationships between various metabolic pathways.• Understand integration of cellular level metabolic events to nutritional disorders and imbalances.
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Course Content		
Unit	Description	Weightage %
1	Cell structures and Organelles, nucleus, Cell Cycle, Cell division –mitosis and meiosis	15%
2	Carbohydrates- Classification, Structure, properties and biological metabolism of Carbohydrates.	15%
3	Proteins and Amino acids: Classification, Structure, properties and biological metabolism of Proteins	15%
4.	Lipids: Classification, Structure, properties and biological metabolism of Lipid.	15%
5.	Nucleic acid: Classification, Structure, properties of DNA and RNA. DNA replication, transcription, translation, Genetic code.	20%
6.	a) Biological Oxidation, Electron Transport Chain, Oxidative Phosphorylation. b) Hormones – Mode of Action, Regulation of Metabolism Biochemical parameters. Endocrinological abnormalities and clinical diagnosis.	20%

Teacher Learning Methodology	Classroom lectures (Blackboard/Power Point Presentations), Discussion on recent updates with related examples.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage %
1.	Internal Written examination	15%
2.	Internal Continuous Assessment in the form of Viva voce, Quizzes, Seminars, Assignments, Attendance	15%
3.	University Examination	70%

Note: Students will have to score a minimum of 40 % to pass the course.

Course Outcomes	
1.	Gain understanding about the structure and function of cell and cell organelles.
2.	Gain understanding about the structure and function of basic biomolecules.
3.	Understand the metabolism of basic biomolecules and Function and regulation of Hormones.

Suggested References:	
Sr. No.	References
1.	Murray, R.K., Granner, D.K., Mayes, P.A. and Rodwell, V.W. (2000): 25th Ed. Harpers Biochemistry. Macmillan Worth Publishers.
2.	Nelson, D.L. and Cox, M.M. (2000): 3rd Ed. Lehninger's Principles of Biochemistry, Macmillan Worth Publishers.
3.	Voet, D. Voet, J.G. and Pratt, C.W. (1999). Fundamentals of Biochemistry.
4.	Plummer, D.T. (1987). 3rd ed. An Introduction to Practical Biochemistry. McGraw-HillBook Co.

