

Department of Liberal Education
Era University, Lucknow
Course Outline
Effective From: 2023-24

Name of the Program	B.A. / B.Sc. (LIBERAL EDUCATION)			Year/ Semester:	2nd / 3rd
Course Name	Nutritional Science	Course Code:	NH201	Type:	Theory
Credits	04			Total Sessions Hours:	60 Hours
Evaluation Spread	Internal Continuous Assessment:	40 Marks		End Term Exam:	35 Marks
Type of Course	<input type="radio"/> Compulsory	<input checked="" type="radio"/> Core	<input type="radio"/> Creative	<input type="radio"/> Life Skill	
Course Objectives	<ol style="list-style-type: none"> To introduce about the importance of macronutrients and micronutrients in maintaining good health. To explain the role of metabolic pathways in metabolic processes. To understand the basics of water and electrolyte balance for good health. 				
Course Outcomes(CO): <i>After the successful course completion, learners will develop following attributes:</i>					
Course Outcome (CO)	Attributes				
CO1	Define and predict ways in which interaction of components of diet influence health and nutrition.				
CO2	Understand the principles and methods of food processing and food preservation.				
CO3	Understand the fundamentals of biochemical pathways associated with metabolism.				
CO4	Understand the importance of Electrolytes as they are critical to the body's functioning; the body can become impaired and lead to death.				
Pedagogy	Interactive, discussion-bases, student-centered, presentation.				
Internal Evaluation Mode	Mid-term Examination: 20 Marks Class test: 05 Marks Online Test/Objective Test: 05 Marks Assignments/Presentation: 05 Marks Attendance: 05 Marks				
Session Details	Topic			Hours	Mapped CO
Unit 1	MACRONUTRIENTS AND MICRONUTRIENTS <ul style="list-style-type: none"> Structure, Functions and Sources of Carbohydrates in diet. Structure, Functions and Sources of proteins in diet. Structure, Functions and Sources of fats in diet. Structure, Functions and Sources of vitamins and minerals in diet. 			15	CO1
Unit 2	FOOD PROCESSING AND FOOD PRESERVATION <ul style="list-style-type: none"> Principles of food processing and food preservation 			15	CO2

	<ul style="list-style-type: none"> • Methods of food processing and food preservation • Effect of cooking on nutritional content of food 		
Unit 3	METABOLIC PATHWAYS <ul style="list-style-type: none"> • Glycolysis and Gluconeogenesis • Citric Acid Cycle • Urea Cycle 	15	CO3
Unit 4	WATER AND ELECTROLYTE BALANCE <ul style="list-style-type: none"> • Water & Electrolyte Balance in maintaining good health • Role of nutrients in maintaining water and electrolyte balance • Acid base balance 	15	CO4

CO-PO and PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1		1	2									2		
CO2	1		1		2	1		2		2			1	
CO3							2		1		2			
CO4			1			1				1			1	1

Strongcontribution-3, Averagecontribution-2, Lowcontribution-1,

Suggested Readings:

Text- Books	<p>Note: A reading material will be provided by the faculty member well in time.</p> <ol style="list-style-type: none"> 1. Food Science, Chemistry and Experimental Foods, Bangalore Print & Publishing 2. Company: 3. Food Science Nutrition, Latest Edition Sunetra Roday, Oxford University Press. 4. Fundamentals of foods, nutrition and diet therapy. New Delhi: New Age International: Mudambi, S., & Rajagopal, M. (2007). 5. Frank Don B et. al 1999 The Health Fitness Handbook ,Human Kinetic 6. Lindsay Ruth, Corbin B Charles (2007) Fitness for Life,human kinetics
Reference Books	<ol style="list-style-type: none"> 1. Nutrition Science, Sixth Edition. Published by New Age International, 2018: Srilakshmi; B ISBN 10: 9386418886 / ISBN 13: 9789386418883 2. Bhait and Savur, S (1998) Fitness for Life. Jaico Pub. House. 10. Hamlyu Encyclopedia of Complimentary Health (1996)
Para Text	<p>Unit 1: https://www.youtube.com/watch?v=TOPywzthZZ4</p> <p>Unit 2: https://www.youtube.com/watch?v=6MevNAKpD-Y</p> <p>Unit 3: https://www.youtube.com/watch?v=v1vqV7YHKWg</p> <p>Unit4: https://www.youtube.com/watch?v=ZownDvv8dw0</p>

Recapitulation & Examination Pattern		
Internal Continuous Assessment:		
Component	Marks	Pattern
Mid Semester	20	Section A: Contains 10 MCQs/Fill in the blanks/One Word Answer/ True-False type of questions. Each question carries 0.5 marks . Section B: Contains 07 descriptive questions out of which 05 questions are to be attempted. Each question carries 03 marks .
Class Test	05	Contains 05 descriptive questions . Each question carries 01 mark.
Online Test/ Objective Test	05	Contains 10 multiple choice questions . Each question carries 0.5 marks.
Assignment/ Presentation	05	Assignment to be made on topics and instruction given by subject teacher.
Attendance	05	As per policy.
Total Marks	40	

Course created by: **Dr. Shazia Fatima**
Dr. Pooja Verma

Signature:

Approved by: **Prof. Afrozul Haq**

Signature: 