



**NATIONAL P. G. COLLEGE**  
(An Autonomous College of University of Lucknow)  
2-Rana Pratap Marg, Lucknow  
Department of Chemistry



**CURRICULUM & PROGRAM STRUCTURE**  
**Food Chemistry and Health (CBCS)**


**Purpose of the Program**

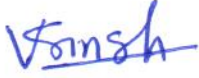
The purpose of the undergraduate chemistry (B.Sc.) program at the university and college level is to provide the key knowledge base and laboratory resources to prepare students for careers as professionals in various industries and research institutions.

**Program Outcomes**

(As per Bloom's Taxonomy)

<b>PO1</b> - Students will have a firm foundation in the fundamentals and application of current chemical and scientific theories including those in analytical, Inorganic, Organic and Physical Chemistries.
<b>PO2</b> – Students will be able to design and carry out scientific experiments as well as accurately record and analyse the results of such experiments.
<b>PO3</b> – Students will be skilled in problem solving, critical thinking and analytical reasoning as applied to scientific problems
<b>PO4</b> – Students will be able to explore new areas of research in both chemistry and allied fields of science and technology
<b>PO5</b> – Students will appreciate the central role of chemistry in our society and use this as a basis for ethical behaviour in issues facing chemists including an understanding of safe handling of chemicals, environmental issues and key issues facing our society in energy, health and medicine.
<b>PO6</b> – Students will be able to explain why chemistry is an integral activity for addressing social, economic, and environmental problems.

  
Principal  
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**B. Sc./B.A./B.Com. CBCS Elective Paper**  
**Semester IV**

<b>Paper Code</b>	<b>CBCS 045</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>Paper Name</b>	<b>Food Chemistry and Health</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>2</b>
<b>Learning Objective</b>	Providing Conceptual knowledge about health and Food constituents. Extend comprehensive knowledge about structure and properties of biomolecules				
<b>Course Outcomes</b>	CO1011 - To introduce about structure and properties of biomolecules CO1012 - The course will enable a student to have a strong foundation to the understanding of enzymes and biological catalysis as well as food technology				

**UNIT-I**

**Chemical Constituents of Foods:**

Desirable and potentially undesirable food constituent and their importance.

Water, Carbohydrate, Lipids, Proteins, Vitamins, Minerals: Classes, Nomenclature Structure and their chemistry.

**UNIT-II**

**Food Chemistry:**

Food adulteration: Detection of adulterated food by simple analytical techniques.


Food poisons: Natural poisons (Alkaloids), pesticides (DDT, BHC, Malathion)


Food additives: artificial sweeteners, food flavors, food colors, emulsifying agents, preservatives, baking powder, yeast, vinegar.

Beverages: soft drinks, fruit juices, alcoholic beverages.

**Suggested Readings:**

1. Text book of Clinical Biochemistry, T.A. Ramakrishna (1994), Publications, Chennai.
2. Text book of Biochemistry and Human Biology, Talwar G.P., Srivatsava LN. and Mondgil K.D., New Delhi, Prentice Hall.
3. Clinical Chemistry in Diagnosis and Treatment, Jean E Zilwa, Peter A. Pannale, Philip R. (1988), New York.
4. Text book of Biochemistry with Clinical Correlations, Devlin D.T. (1997), New York, John wiley and Sons.

  
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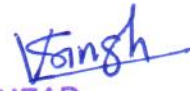


**CO-PO MAPPING:**

	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	1	1	1	2	2
CO2	2	1	1	1	2	3

<b>3</b>	<b>High Correlation</b>
<b>2</b>	<b>Moderate Correlation</b>
<b>1</b>	<b>Low Correlation</b>
<b>0</b>	<b>No Correlation</b>

  
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