

FOOD SCIENCE - I

Sem	Subject Code	Category	Lecture		Theory		Practical	Credits
I	21CNF1A	Core paper I	Hrs/sem	Hrs/Per week	Hrs/sem	Hrs/Per week	----	4
			90	6	90	6		

COURSE OBJECTIVES

The students will be able to

1. Obtain knowledge of different food groups based on their classification and nutritive value
2. Understand the scientific principles underlying food preparation and different methods of cooking foods.
3. Develop skill and techniques in food preparation with conservation of nutrients and palatability using cooking methods generally employed.

COURSE OUTCOMES

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

CO Number	CO Statement	Knowledge Level (K1 – K4)
CO1	Understanding the basic food groups and its nutrients	K1-K2
CO2	Learning the different methods of cooking on acceptability and Palatability	K1-K2
CO3	Learning composition and nutritive value of cereal and its Products	K1-K2
CO4	Understanding the composition and nutritive value of Pulses and Nuts	K1-K2
CO5	Understanding the composition and nutritive value of Vegetables and Fruits.To become proficient for specialization in nutrition	K1-K4

Knowledge level: K1 – Remember, K2 – Understand, K3 – Apply, K4 – Analyse.

MAPPING WITH PO

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

S – Strong, M – Medium, L – Low

UNIT I**18 Hours**

Definition of Food and Food Science. Functions of food in relation to health – classification of foods based on nutrients. **Food groups** – Basic Four, Basic Five and Basic seven.

UNIT II**18 Hours**

Preliminary preparation of foods prior to cooking with special reference to conservation of nutrients and palatability. Objectives of Cooking. **Cooking Methods** - Dry methods – frying, boiling, parching, and baking. Moist heat methods – Boiling, stewing, cooking under pressure. Combination methods. Microwave cooking – advantages and disadvantages.

UNIT III**18 Hours**

Cereal and cereal products – Microscopic structure of various starch granules – Nutritive value of Rice, Wheat and locally available millets. Effect of cooking on the nutritive value of cereals. Gelatinization, Dextrinization, gluten formation.

UNIT IV**18 Hours**

Pulses and nuts – composition, Nutritive value of grams, dhal – some common nuts-meat substitutes – soya products. Textured Vegetable Protein (TVP). Effect of cooking on pulses.

UNIT V**18 Hours**

Vegetables and Fruits – Classification, composition and Nutritive value – methods of minimize the loss of nutrients, color, texture, flavor, Browning reaction – changes during cooking.

TEXT BOOKS:

S.No.	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
	B.Srilakshmi	Food Science	New Age International Private Ltd.,	2002
2.	Swaminathan	HandBook of Food Science and Experimental Foods	Bappco, Bangalore	1992
3.	N. ShakuntalaManay, M. Shadaksharaswamy	Foods and Principles	New Age International Publishers	2001
4.	Mudambi, S.R. Rao, S.M	Food Science	Wiley Eastern Ltd, New Delhi	1986

5.	Potter, N. and Hotch Kiss, J.H.	Food Science	CBS Publishers and Distributors, New Delhi	1996
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REFERENCE BOOKS:

S.No.	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1.	Helen Charley	Food Science	Wiley Eastern Ltd, New Delhi	1986
2.	A.G. Peckam	Foundation of Food Preparation	CBS Publishers and Distributors, New Delhi	1996
3.	Manay. N.S	Foods – facts and principles	New age International Pvt. Ltd. Publishers, New Delhi	1996
4.	Swaminathan. M	Food Science and Experimental Foods	Ganesh and Co, Chennai,	1988
5.	Sharma.A	Text book of Food Science & Technology, 1st edition	International Book Distributing Co.,	2006
6.	Roday.R	Food Science & Nutrition	Oxford University Press	1999
7.	Jan. S	Elements of Food Science	New India Publishing Agency, New Delhi-88	-

WEB SOURCES:

1. <https://www.cbsenetonline.in/updated-cbse-ugc-net-syllabus-for-home-science>