

CODE	COURSE TITLE
18NDUCP01	Practical I - FOOD SCIENCE

Category	CIA	ESE	L	T	P	Credit
Core	20	30	--	--	45	2

### Preamble

The theoretical principles of Food Science is practically applied by the students to develop skills on the art of cooking along with a scientific approach.

### Course Outcomes

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

CO Number	CO Statement	Knowledge Level
CO1.	Learn the nutritive value and grouping of foods.	K <sub>1</sub>
CO2.	Acquire knowledge on the measuring of raw ingredients and the percentage of edible portion.	K <sub>3</sub>
CO3.	Make use of all the foods in Basic Food Group system for the preparation of various recipes.	K <sub>3</sub>
CO4.	Apply the scientific principles through Experimental Cookery.	K <sub>3</sub>
CO5.	Develop value added products since cooking should become a passion for a food science student.	K <sub>3</sub>

### Mapping with Programme Outcomes

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

S- Strong; M-Medium; L-Low

## Syllabus

S.No	Topic	Practicals
1	Food groups	Grouping of foods – Nutritive value of all foods
2	Measuring ingredients	Measuring raw ingredients.
3	Edible portion	Determination of percentage of edible portions
4	Microscopic Structure of Various Starches	Rice, Wheat, Corn, Ragi and potato starch identification
5	Physical and Chemical properties of Starch	To study the physical and chemical properties of Starch
6	Gelatinization of Starch	To study the physical and chemical properties of Starch
7	Cereals and Pulses cookery	Fine and coarse cereal cookery study the effect of hard water, soft water, sodium bicarbonate, vinegar and soaking, while cooking. Study the effect of germination of green gram and recipe preparation using germinated gram as main ingredient. Extruded product preparation
8	Millets	Value added products from millets
9	Vegetable and Fruits cookery	Effect of cooking time of vegetables Effect of different methods of cooking Effect of acid and alkali on vegetables Darkening of raw fruits and its prevention Blanching of vegetables; Recipe preparation.
10	Sugar cookery	Various stages of sugar cookery.
11	Egg cookery	Effect of heat on Egg white and Yellow Effect of cooking time – boiling of egg. Whipping quality of egg white Poaching of eggs; Recipe preparation.
12	Milk cookery	Boiling of milk – skim milk preparation. Khoa preparation – Ice – cream preparation; Recipe preparation.
13	Beverages	Preparation of milk based & fruits based beverages.

14	Meat cookery	To assess tenderness of meat using papaya and Ginger. Cooking time – meat and poultry – Recipe preparation using meat and poultry.
15	Fish Cookery	Cooking time assessment. Protein change during boiling and roasting; Recipe preparation.

CODE	COURSE TITLE
18NDUCP02	Practical II - FAMILY MEAL MANAGEMENT

Category	CIA	ESE	L	T	P	Credit
Core	20	30	--	--	45	2

### Preamble

The practical course aims at planning and preparation of nutritious meals for individuals based on their income level, age, physical activity and dietary pattern.

### Course Outcomes

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

CO Number	CO Statement	Knowledge Level
CO1.	Learn how to apply food facts and principles, communication techniques and meal management strategies to improve the nutritional status of individuals.	K <sub>1</sub>
CO2.	Plan and prepare nutritious and delicious meals for different age groups with cost calculation.	K <sub>3</sub>
CO3.	Demonstrate the nutritive value of the prepared menu and compare with the RDA.	K <sub>2</sub>

<b>CO4.</b>	Solve the problems of malnutrition by preparing weaning and supplementary foods.	K <sub>3</sub>
<b>CO5.</b>	Choose the locally available low cost foods in menu planning based on food preferences.	K <sub>1</sub>

### Mapping with Programme Outcomes

<b>COs</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>
<b>CO1.</b>	S	S	S	S	S
<b>CO2.</b>	S	M	M	S	S
<b>CO3.</b>	S	S	S	S	M
<b>CO4.</b>	S	S	S	S	S
<b>CO5.</b>	S	S	S	S	S

S- Strong; M-Medium; L-Low

### Syllabus

Planning, preparation and nutritional evaluation of diets in relation to physiological state.

1. Planning and preparation of a balanced diet for a pregnant woman.

2. Diet during complication of pregnancy.

3. Planning and preparation of a balanced diet for a lactating woman.

4. Preparation of weaning foods supplementary foods.

5. Planning and preparation of a balanced diet for pre-school child.

6. Balanced diet for school going child. Preparation of packed lunch.

7. Planning and preparation of a balanced diet for adolescence.

8. Planning of meals for adult belonging to different income group.

9. Planning meal for senior citizen.

CODE	COURSE TITLE						
18NDUC101	HUMAN PHYSIOLOGY						
Category	CIA	ESE	L	T	P	Credit	
Core	25	75	43	2	--	4	

### Preamble

The course describes about basic concepts of Human Physiology, including the structure and functions of cell and tissues. Students learn about digestive system, blood, circulatory system, excretory system, respiratory system, endocrine glands, male and female reproductive system. It explains the structure and functions of muscles and nervous system.

### Course Outcomes

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

CO Number	CO Statement	Knowledge Level
CO6.	Outline the anatomy and functions of human organ system.	K2
CO7.	Acquire knowledge on composition, functions and components of blood.	K3
CO8.	Understand the structure and mechanisms of action of endocrine glands.	K2
CO9.	Extend the understanding of structure and functions of male and female reproductive system with the hormonal control.	K2
CO10.	Interpret the structure, mechanism and regulation of action of muscles and nervous system.	K2

### Mapping with Programme Outcomes

COs	PO1	PO2	PO3	PO4	PO5
CO6.	S	S	M	S	S
CO7.	S	S	M	S	S

<b>CO8.</b>	S	S	M	S	S
<b>CO9.</b>	S	S	M	S	S
<b>CO10.</b>	S	S	S	S	S

S- Strong; M-Medium; L-Low

## Syllabus

### UNIT –I (9 Hrs.)

**Cell and its Organallae:** Structure and function. **Tissues:** Structure and functions of epithelial and connective tissues Digestive system: *Organisation, digestion, absorption and assimilation of carbohydrates, proteins and fats.*

### UNIT –II (9 Hrs.)

**Blood:** Composition & functions of blood, RBC, WBC and platelets – structure and functions. Blood pressure, cardiac impulse, ECG, Composition & functions of lymph, blood coagulation, blood groups and blood transfusion. **Heamoglobin – Structure and function.** **Circulatory System:** Heart structure and functions, blood & lymph vessels and their functions, cardiac cycle, **Excretory system:** Excretory Organs – Structure of kidney and its functions, structure of nephron, formation of Urine, *Composition of Urine, micturition.*

### UNIT – III (9 Hrs.)

**Respiratory System:** Basic anatomy of the respiratory system, Mechanism of respiration, diffusion of gases in lungs. Transport of oxygen from lungs to tissues through blood, transport of CO<sub>2</sub> from tissues to lungs through blood, factors influencing the transport of O<sub>2</sub> and CO<sub>2</sub>. **Endocrine Glands:** Structure and functions of pituitary, thyroid and parathyroid, pancreas and adrenal Gland.

### UNIT – IV (9 Hrs.)

**Male and female Reproductive System:** Structure of male reproductive organ, spermatogenesis, function of testis. Female Reproductive system - Ovarian cycle, structure and hormones of ovaries, menstrual cycle, menopause, pregnancy, *parturition and lactation.*

### UNIT - V (9 Hrs.)

**Muscles and Nervous system:** Structure, myosin & actin and regulatory proteins, mechanism of

**muscular contraction and relaxation.** **Brain and Nervous System:** Functions of cerebrum, optic thalamus, midbrain, pons medulla oblongata Hypothalamus, and cerebellum. Spinal cord functions – ANS functions; sympathetic and parasympathetic, structure of neuron, resting and action potential, structure of neuromuscular junction. Defence Mechanism of the body: Types of immunity and *Immunisation.*

## PHYSIOLOGY PRACTICALS

1. Cytological preparation showing various parts of the cell.
2. Detailed study of various tissues –identification of slide.
3. Dissection of mammalian viscera – study of organs.
4. Blood cells – freshly mounted and stained.
5. RBC & WBC counting – neubauer’s counting chamber.
6. Determination of Heamoglobin – Shali’s method.
7. Demonstration of coagulation of Blood.
8. Demonstration of Blood Group.
9. Recording pulse rate and measurement of blood pressure.

**Distribution of Marks: 100% Theory.**

Text Books				
Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Ravikumar Patil,H.S., Makari,H.K. and others	Textbook of Human Physiology	I.K. International Publication House Pvt. Ltd.	2013 and 1 <sup>st</sup> Edition
2.	David Male, Jonathan Brostoff, David B. Roth, Ivan M. Roitt	Immunology	Elsevier	2013 and 8 <sup>th</sup> Edition
3.	Elaine N. Marieb	Essentials of Human Anatomy and Physiology	Pearson Education	2007 and 1 <sup>st</sup> Edition
Reference Books				
Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition

1.	Sembulingam.K and Prema Sembulingam	Essentials of Medical Physiology	Jaypee Brothers Medical Publishers (P) Ltd.	2016 and 7 <sup>th</sup> Edition
2.	Muruges, N.	Basic Anatomy and Physiology	Sathya Publishers	2004 and 5 <sup>th</sup> Edition
3.	Bakhru, H.K.	Vitamins that Heal : Natural Immunity For Better Health	Orient Paperbacks	2014 and 1 <sup>st</sup> Edition
4.	Donald C. Rizzo	Fundamentals of Anatomy and Physiology	Thomson Delmar	2007 and 2 <sup>nd</sup> Edition
5.	Jain.A.K	Human Physiology	Arya Publishers	2017 and 3 <sup>rd</sup> Edition

### Pedagogy

- Lecture, PPT, Assignment, Group Discussion, Seminar

### Bloom's Taxonomy Based Assessment Pattern

#### Components of CIA Marks

Tests (I & II)	Assignment / Seminar / Subject Viva	Model Examination	Total
10	5	10	25

#### CIA

Bloom's Category	Section	Choice	Marks	Total
K1	A	Compulsory	2 x 2 = 4	30
K1 & K2	B	Either / Or	2 x 5 = 10	
K2 & K3	C	Open Choice (2 out of 3)	2 x 8 = 16	

#### Model and End Semester Examination

Bloom's Category	Section	Choice	Marks	Total
K1	A	Compulsory	5 x 2 = 10	75
K1 & K2	B	Either / Or	5 x 5 = 25	



K2 & K3	C	Open Choice (5 out of 8)	5 x 8 = 40	
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<b>CODE</b>	<b>COURSE TITLE</b>
18NDUC102	FOOD SCIENCE

Category	CIA	ESE	L	T	P	Credit
Cereals	25	75	12	2		4

### Preamble

The course emphasizes the students to familiarize on the different food groups, their sources and functions. It focuses on the structure, composition, nutritive value, principles and fundamental methods of cooking various foods namely Cereals, Pulses, Vegetables and Fruits, Nuts and Oil Seeds, Sugar, Milk, Egg, Flesh foods, Beverages and Spices and Condiments.

### Course Outcomes

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

CO Number	CO Statement	Knowledge Level
CO11.	Classify the foods, food groups and relate its functions.	K <sub>2</sub>
CO12.	List the objectives and different methods of cooking.	K <sub>1</sub>
CO13.	Interpret the structure, composition and nutritive value of different foods.	K <sub>2</sub>
CO14.	Identify the effect of heat and changes that occurs during cooking.	K <sub>3</sub>
CO15.	Apply the basic principles of cookery namely crystallization of	K <sub>3</sub>

	sugars, gelatinization and dextrinization of starches, germination of pulses, browning reaction, foam formation in egg and tenderization of meat.	
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### Mapping with Programme Outcomes

COs	PO1	PO2	PO3	PO4	PO5
CO11.	S	S	S	S	S
CO12.	S	S	M	S	S
CO13.	S	M	S	S	M
CO14.	S	S	S	S	S
CO15.	S	M	S	M	S

S- Strong; M-Medium; L-Low

### Syllabus

#### UNIT –I

(9 Hrs.)

**Introduction to Food Science:** Definition of Food and Food Science. **Food group:** Basic 4 (suggested by ICMR), Basic 5 & 7 food groups; functional food groups – energy yielding, body building and protective foods and *food pyramid*. **Study of various cooking methods:** Objectives of cooking, Preliminary preparations, Boiling, steaming, stewing, frying, baking, roasting, broiling, and cooking under pressure, Microwave cooking and Solar cooking – advantages and disadvantages. Physical and chemical change with reference to general and not specific cooking methods. Stages of sugar cookery, *crystallization and factors affecting crystallization*.

#### UNIT –II

(9 Hrs.)

**Cereals :** Composition of rice, wheat, effects of cooking parboiled and raw rice, principles of starch cookery, gelatinization, dextrinization, flours-types, formation of dough and batter, *hydration and development of gluten*. **Pulses and grams:** Varieties of pulses and grams, composition, nutritive value, cooking quality of pulses, *germination and its effect*.

#### UNIT – III

(9 Hrs.)

**Vegetables:** Classification, composition, nutritive value, selection and preparation for cooking methods and principles involved in cooking of vegetables. **Fruits** – Classification, composition, nutritive value, changes during ripening, methods and effect of cooking, *enzymatic browning*. **Phytochemicals and Nutraceuticals** – Concept and significance. **Milk and Milk Products:**

Composition, nutritive value, kinds of milk, cooking principles and methods, changes in milk during heat processing and cooking and *preparation of ice cream*.

#### UNIT – IV

(9 Hrs.)

**Egg:** Structure, composition, selection, nutritive value, uses of egg in cookery, methods of cooking, *foam formation and factors affecting foam formation*. **Flesh foods:** Types of flesh foods- Meat, Poultry, and fish: composition, nutritive value, selection of meat, post mortem changes in meat, aging, tenderness and methods of cooking and effects. Poultry – types, composition and nutritive value. **Fish:** Structure, composition, nutritive value, selection of fish, *methods of cooking and its effects*.

#### UNIT - V

(9 Hrs.)

**Fats – Nuts and Oils:** Types of oils, function of fats and oils, shortening effects of oil, smoking point of oil, effect of heat on oil absorption and *factors affecting absorption of oil*.

**Beverages and Other foods:** Classification, nutritive value, milk based beverages; fruit based beverages and preparation of carbonated beverages. **Spices and Condiments:** *Uses and abuses*.

**Field Visit:** Visit to food industries in local areas.

#### Distribution of Marks: 100% Theory

Text Books				
Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Srilakshmi.B	Food Science	New Age International Publishers	2018 and 7 <sup>th</sup> Edition
2.	Shakuntala Manay.N., Shadaksharaswamy.M.	Food Facts and Principles	New Age International Publishers	2010 and 3 <sup>rd</sup> Edition
3.	Vickie.A, Vaclavik, Elizabeth.W, Christian	Essentials of Food Science	Springer	2005 and 2 <sup>nd</sup> Edition

#### Reference Books

<b>Sl.No.</b>	<b>Author Name</b>	<b>Title of the Book</b>	<b>Publisher</b>	<b>Year and Edition</b>
1.	Bobby George	Food & Beverage Service	Jaico Publishing House	2010 and 1 <sup>st</sup> Edition
2.	Pramila Khadun	Food & Nutrition	Bhumika Creations	2014 and 1 <sup>st</sup> Edition
3.	Mahindru. S.N	Spices	APH Publication Corporation	2013 and 1 <sup>st</sup> Edition
4.	Norman.N. Potter, Joseph.H. Hotchkiss	Food Science	CBS Publishers & Distributors	2007 and 5 <sup>th</sup> Edition
5.	Bernard Davis and Others	Food and Beverage Management	Routledge	2016 and 5 <sup>th</sup> Edition

<b>CODE</b>	<b>COURSE TITLE</b>						
18NDUC203	PRINCIPLES OF NUTRITION						
	<b>Category</b>	<b>CIA</b>	<b>ESE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credit</b>
	Core	25	75	43	2	--	4

## Preamble

The course explains classification, functions, digestion, absorption, effects and deficiency of macro and micronutrients. Students understand the vital link between nutrition and health.

## Course Outcomes

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

CO Number	CO Statement	Knowledge Level
CO16.	Find out the energy value of food and energy requirements of the body.	K <sub>1</sub>
CO17.	Outline the classification and describe the functions, sources and requirements of macronutrients.	K <sub>2</sub>
CO18.	Acquire knowledge on digestion, absorption, utilization of macronutrients and their effect of deficiency.	K <sub>3</sub>
CO19.	Understand the functions, sources, requirements and deficiency disorders of vitamins and minerals.	K <sub>2</sub>
CO20.	Apply knowledge on water and electrolyte balance.	K <sub>3</sub>

## Mapping with Programme Outcomes

COs	PO1	PO2	PO3	PO4	PO5
CO16.	S	S	S	M	S
CO17.	S	S	S	S	S
CO18.	S	S	S	S	S
CO19.	S	S	S	S	S
CO20.	S	S	M	S	S

S- Strong; M-Medium; L-Low

## Syllabus

### UNIT –I

(9 Hrs.)

**Introduction to Nutrition:** General introduction, Historical aspects, calorimetric studies, some

important definitions. Functions of food, social function of food, psychological functions of food  
Energy: Definition of Kilocalories, Joule, energy value of foods, determination, physiological fuel  
values, SDA of foods, Reference Man and Reference Woman. Determination of energy requirements  
of body, basal metabolic rate – determination, factors influencing BMR, Recommended Dietary  
Allowance for energy. Carbohydrates: Classification, functions, sources, digestion, *absorption and  
utilization, dietary fibre and health.*

#### UNIT –II

(9 Hrs.)

**Protein:** Classification (chemical and biological), functions, sources and requirements, digestion, absorption and utilization. Nutritional value of proteins, and supplementary value of protein. Definition: biological value NPU, digestibility coefficient, PER-definition and measurement. Deficiency due to shortage of protein and energy – PCM, reference protein egg (FAO), essential amino acids, and mutual supplementation of dietary protein. **Fats and Lipids:** Classification, functions, sources, requirement, digestion, absorption and utilization Importance of essential fatty acids, *their requirements and deficiency.*

#### UNIT – III

(9 Hrs.)

**Vitamins:** Fat soluble vitamins – A, D, E and K – History, functions, sources, requirements, deficiency disorders. Water soluble vitamins: The B- Complex vitamins - Thiamine, Riboflavin, Niacin, Folic acid, Biotin, Pantothenic acid, and Vitamin–C, functions, sources, *requirements and deficiency disorders.*

#### UNIT – IV

(9 Hrs.)

**Minerals:** General functions in the body, classification – macro and micro minerals. Micro minerals – Iron, Fluorine, Zinc, Copper, Iodine and other micronutrients, - sources, functions, requirements, deficiency and toxicity. Macro Minerals: Calcium & Phosphorus – sources, functions, absorption, utilization, requirements, *deficiency, and toxicity.*

#### UNIT - V

(9 Hrs.)

**Water and electrolytes balance:** Distribution, Functions, requirements and sources of water and electrolytes. Maintenance of water and electrolyte balance – water depletion, water excess and oedema. Requirements of salt, *regulation of acid – base balance in the body.*

**Distribution of Marks: 100% Theory**

#### Text Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
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1.	Srilakshmi.B	Nutrition Science	New Age International Publishers	2015 and 4 <sup>th</sup> Edition
2.	Gajalakshmi, R.	Nutrition Science	CBS Publishers & Distributors Pvt. Ltd	2015 and 1 <sup>st</sup> Edition
3.	Paul Insel, Don Ross, Kimberley McMahon, Melissa Bernstein	Discovering Nutrition	Jones & Bartlett Learning	2016 and 5 <sup>th</sup> Edition

### Reference Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Denis M. Medeiros and Robert E.C.Wildman	Advanced Human Nutrition	Jones & Bartlett Learning	2015 and 3 <sup>rd</sup> Edition
2.	Catherine A. Geissler, Hilary J Powers	Human Nutrition	Elsevier	2013 and 12 <sup>th</sup> Edition
3.	Jain.S.C.	A Complete Book on Health and Nutrition	Cyber Tech Publications	2009 and 1 <sup>st</sup> Edition
4.	Sunetra Roday	Food Science & Nutrition	Oxford University Press	2009 and 2 <sup>nd</sup> Edition
5.	Blank.F.C	A Handbook of Foods and Nutrition	Agrobios (INDIA)	2010 and 1 <sup>st</sup> Edition

### Pedagogy

- Lecture, PPT, Assignment, Group Discussion, Seminar

CODE	COURSE TITLE
18NDUC204	FAMILY MEAL MANAGEMENT

Category	CIA	ESE	L	T	P	Credit
Core	25	75	43	2	--	4

### Preamble

The course disseminate knowledge on the basic principles of menu planning, RDA, Nutritional needs during various stages of life cycle namely Pregnancy, Lactation, Infancy, Pre School children, School Children, Adolescence, Adult and Old age.

### Course Outcomes

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

CO Number	CO Statement	Knowledge Level
CO21.	Define the nutritional requirements (RDA) for all age groups.	K <sub>1</sub>
CO22.	Construct menu plan for different age groups.	K <sub>3</sub>
CO23.	Utilize the diet plan for special conditions in consideration with physiological changes.	K <sub>3</sub>
CO24.	Relate breast feeding and its importance with weaning and supplementary foods.	K <sub>2</sub>
CO25.	Outline the nutritional importance for vulnerable groups through balanced diets.	K <sub>2</sub>

### Mapping with Programme Outcomes

COs	PO1	PO2	PO3	PO4	PO5
CO21.	S	S	M	S	S
CO22.	M	S	S	S	S
CO23.	S	S	S	S	S
CO24.	S	S	S	S	S
CO25.	S	S	S	S	M

S- Strong; M-Medium; L-Low



## Syllabus

### UNIT –I

(9 Hrs.)

**Basic principles of menu planning:** *Importance of menu planning.* Definition of Reference Man and Woman. RDA- for all age groups, uses and calculation of various nutrients in a day's menu. Plan a day's menu for low, middle and high income groups.

### UNIT –II

(9 Hrs.)

**Nutritional needs during Pregnancy and Lactation:** Food Requirements, Physiological changes during pregnancy – Complications in pregnancy – physiology of lactation. Nutritional considerations in pregnancy and lactation – *Menu plan for pregnant and lactating mothers.*

### UNIT – III

(9 Hrs.)

**Nutritional needs during infancy :** Food Requirements, Nutritional demands during infancy – advantages of breast feeding – composition of human milk – comparison of human milk with cow's milk formula – factors to be considered in bottle feeding – different milk formulas, weaning foods – meaning, need and importance, *weaning foods developed by different organizations.*

### UNIT – IV

(9 Hrs.)

**Nutritional needs of pre-school children and school children:** Food Requirements, Factors to be considered in planning meals for pre-school children, eating problems and their management- preparation of Supplementary foods using available low-cost foods - weaning foods. Nutrition for school children: nutritional requirements and *meal planning for school children.* Packed lunch.

### UNIT - V

(9 Hrs.)

**Nutritional needs during adolescence, adults and old age:** Food Requirements, Special demands during menarche, nutritional problems of adolescence. Nutrition needs for adults: Food Requirements, (men & women) in relation to occupation-meal planning. Nutrition during old age: Food Requirements, *nutritional problems of aged and their management.* Menu plan for various age groups.

**Field Visit:** Visit to maternal hospitals and clinics.

**Distribution of Marks: 100% Theory**

**Text Books**

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Srilakshmi.B	Dietetics	New Age International Publishers	2014 and 7 <sup>th</sup> Edition
2.	Sara Abraham	Nutrition Through Lifecycle	New Age International Publishers	2016 and 1 <sup>st</sup> Edition
3.	Raheena Begum.M	A Text Book of Foods, Nutrition and Dietetics	Sterling Publishers	2009 and 3 <sup>rd</sup> Edition

**Reference Books**

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Sari Edelstein	Life Cycle Nutrition (An Evidence -Based Approach)	Jones & Bartlett Learning	2015 and 2 <sup>nd</sup> Edition
2.	Carolyn Dunn	Nutrition Decisions Eat Smart, Move More	Jones & Bartlett Learning	2016 and 1 <sup>st</sup> Edition
3.	James Robinson, Deborah J. McCormick	Concepts In Health & Wellness	Delmar Cengage Learning	2011 and 1 <sup>st</sup> Edition
4.	Madhu Garg	Diet, Nutrition and Health	ABD Publishers	2006 and 1 <sup>st</sup> Edition
5.	Shubhangini A. Joshi	Nutrition and Dietetics	Tata Mcgraw-Hill	2016 and 4 <sup>th</sup> Edition

**Pedagogy**

- Lecture, PPT, Assignment, Group Discussion, Seminar

