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No.AC.2(S)/31/18-19

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Crawford Hall, Mysuru- 570 005  
Dated: 15.06.2018

**NOTIFICATION**

**Sub:** Revision of syllabus for Home Science (UG) as per CBCS pattern from the academic year 2018-19.

- Ref:** 1. Decision of Board of Studies in Home Science (UG) meeting held on 02.03.2018 & 08.03.2018.  
2. Decision of the Faculty of Science & Technology Meeting held on 21.04.2018.  
3. Decision of the Deans Committee meeting held on 22.05.2018.

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The Board of Studies in Home Science (UG) which met on 02<sup>nd</sup> March, 2018 and 08<sup>th</sup> March, 2018 has recommended to revise the syllabus for B.Sc. Home Science as per CBCS pattern from the academic year 2018-19.

The Faculty of Science and Technology and the Deans committee meetings held on 21-04-2018 and 22-05-2018 respectively have approved the above said proposal with pending ratification of Academic Council and the same is hereby notified.

The CBCS syllabus of B.Sc. Home Science course is annexed. The contents may be downloaded from the University website i.e., [www.uni-mysore.ac.in](http://www.uni-mysore.ac.in).

**Draft approved by the Registrar**

*M. Y. S. 15/6*  
Deputy Registrar(Academic)

**To:**

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DoS in Physics, Manasagangotri, Mysore.
3. The Chairperson, BOS in Home Science, DoS in Food Science & Nutrition, Manasagangotri, Mysore.
4. The Chairperson, Department of Studies in Home Science, Manasagangotri, Mysore.
5. The Director, College Development Council, Moulya Bhavan, Manasagangotri, Mysore.
6. The Principals of the Affiliated Colleges where UG Program is running in Science stream.
7. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
8. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.
9. Office file.

**UNIVERSITY OF MYSORE**  
**Choice Based Credit System Syllabus of Bachelor's Degree Programme in**  
**Family Resource Management**

Sem	Sl. No.	Code No.	Type of the Course	Title of the Course	Credit Pattern in L:T:P	Credit Value	Hours/Week L:T:P	Total Hours
I	1.	FRM	DSC-2A	Introduction to Family Resource Management	3: 1: 2	4	3: 2: 4	9
II	2.	FRM	DSC-2B	Housing and building services	3: 1: 2	4	3: 2: 4	9
III	3.	FRM	DSC-2C	Family finance and consumer economics	3: 1: 2	4	3: 2: 4	9
	4.	FRM-BA	SEC-1	Communication Skills	0: 1: 1	2	0: 2: 2	4
IV	5.	FRM	DSC-2D	Entrepreneurship Management	3: 1: 2	4	3: 2: 4	9
	6.	FRM-BA	SEC-2	Computer Applications	0: 1: 1	2	0: 2: 2	4
V	7.	FRM	DSE-2A -1	Art of entertainment and etiquette	3: 1: 2	6	3: 2: 4	9
	8.	FRM	DSE-2A-2	Introduction to CAD	3: 1: 2	6	3: 2: 4	9
	9.	FRM-BA	GE-1	Art of living	1: 0: 1	2	1: 0: 2	3
	10.	FRM-BSc	SEC-1	Human Resource Management	0: 0: 2	2	0: 0: 4	4
	11.	FRM-BSc	SEC-2	Front Office and Personal Management	1: 0: 1	2	1: 0: 2	3
VI	12.	FRM	DSE-2B-1	Interior Decoration	3: 1: 2	6	3: 2: 4	9
	13.	FRM	DSE-2B-2	Event management	3: 1: 2	6	3: 2: 4	9
	14.	FRM-BA	GE-2	Resource Management	1: 1: 0	2	1: 2: 0	3
	15.	FRM-BSc	SEC-3	Travel and Tourism	1: 0: 1	2	1: 0: 2	3
	16.	FRM-BSc	SEC-4	Advertising and Labelling information	1: 1: 0	2	1: 2: 0	3

## DSC-2A INTRODUCTION TO FAMILY RESOURCE MANAGEMENT

3+ 1+ 2= 6 Credits/week

3+2+4=9hrs/week

UNITS	TOPICS	HOURS
Unit -1	Resource Management: Introduction and Classification of resource, Characteristics of resources, Factors affecting uses of resources.	10
Unit – 2	Concepts of Management: Definition and importance of management, Management process - Planning – types and importance, Controlling – sub steps in controlling, Evaluation – Types, Styles in management	10
Unit – 3	Decision making in management: Definition and importance of decision making, Types of decision, Process of decision making, Methods of resolving conflicts, Motivating factors in decision making – values, goals and standards	10
Unit – 4	Time management: Importance of time, Tools in time management, Time management process	08
Unit – 5	Energy Management: Importance of energy, Types of efforts required for various activities, Fatigue – Types, methods of over-coming fatigue, Work simplification – Definition, Mundell’s classification, Ergonomics – Definition, scope, objectives, Domains, Man, Machine and Environment(MME).	10

### PRACTICALS:

SL. No.	TOPIC	CLASSES
1.	Decision Making –Identify a problem and solve it using steps in decision making	03
2.	Plan a time and activity chart for 3 days – Evaluate and make suggestions for improvement	03
3.	Energy Management – a. Using factorial method calculate energy expenditure and physical activity level b. Calculate energy cost of selected activities using heart rate monitor	04
4.	Work simplification techniques: Pathway chart, process chart	03
5.	Application of management process for different activities	03

## DSC-2B HOUSING AND BUILDING SERVICES

3+ 1+ 2= 6 Credits/week

3+2+4=9hrs/week

Units	Topics	Hours
Unit I	Housing – need for housing, functions of house, – types of dwelling unit, influence of family life cycle on dwelling units	8
Unit II	Criteria in Site selection , principles of house planning, Types of house plans – Site plan, floor plan, Elevation, Cross sectional plan and perspective plan.	08
Unit III	Building Components and - Substructure – Foundation, types of foundations, Superstructure – Wall, Doors and Windows, Roof	14
Unit IV	Building Services: Water supply, Electricity, Plumbing and sanitation	10
Unit V	Conservation Practices- Rain water Harvesting, utilization of solar energy, Waste management at household level.	08

### PRACTICAL

Units	Topic	Hours
1	House plans – Architectural symbols, Setbacks, Site plan and Floor Plans	03
2	Illustrate – Foundation, part of a doors and windows	03
3	Illustrate Electric, plumbing and sanitary layout	03
4	Visit to a Rain water Harvesting unit and write a report	03
5	Project on waste Management and write a report	04

## DSC-2C FAMILY FINANCE AND CONSUMER ECONOMICS

3+ 1+ 2= 6 Credits/week

3+2+4=9hrs/week

Units	Topics	Hours
Unit I	Concept of Income management. Income, types and source Budget planning, Supplementing family income	6
Unit II	<b>Savings</b> - Need for saving, saving institute –Bank – Indian banking System and banking Transactions. Post office, UTI, Provident fund, Chit funds	10
Unit III	<b>Insurance</b> - Definition and importance of Insurance. Principles of insurance, types of insurance-Life and health. <b>Investment</b> -Principles of investment .Types of investments- Shares, Debentures, bonds and Mutual funds	10

Unit IV	Consumer Problems and Protection: Consumer- Definition, Types of Consumer Problem, Consumer Protection - Government and Private. Consumer redressal, functioning of consumer courts	08
Unit V	Consumer information and education: Consumer Aids – label, brand, trademark and other certification marks, Consumer rights and Responsibilities, Consumer education and awareness	08

### PRACTICALS

Units	Topic	Hours
1	Budget planning for different income groups	02
2	Visit and report on saving institution/ consumer protection agencies	02
3	Procedures of banking transaction	03
4	Illustrate different types of consumer aids	04
5	Outreach programme on insurance Life/health/ consumer awareness programme	05

### DSC-2D Entrepreneurship Management

3+ 1+ 2= 6 Credits/week  
3+2+4=9hrs/week

Units	Topics	Hours
<b>Unit I</b>	Entrepreneurship – Introduction & Definition of Entrepreneurship, Entrepreneurship and Entrepreneur & Enterprise – Functions of Entrepreneur -factors influencing Entrepreneurship – pros and cons of being Entrepreneur – qualities of an Entrepreneur – types of Entrepreneur.	<b>06</b>
<b>Unit II</b>	Small Scale industry – Definition – meaning – Product Range – capital Investment – ownership patterns – meaning and importance of tiny industries, Ancillary Industries, cottage industries. Role played by SSI's and the steps taken to solve the problems – policies governing SSI's	<b>08</b>
<b>Unit III</b>	Formation of small scale industry – Business opportunity, scanning the environment for opportunities, evaluation of alternatives and selection based on personal competencies. Steps involved in the formation of a small business venture – location, clearances and permits required, formalities, licensing and registration procedure. Assessment of the market for the proposed project – financial, technical, market and social feasibility study	<b>10</b>
<b>Unit IV</b>	Preparing the business plan (BP) – meaning, importance, preparation – BP format – financial aspects, marketing aspect, human resource,	<b>08</b>

	technical aspect, social aspect of the BP. Common pit falls to be avoided in preparation of a BP.	
<b>Unit V</b>	Project assistance – Financial assistance through SFC’s, SIDBI, Commercial banks, IFCI – non financial assistance from DIC, SISI, AWAKE, KVIC – Financial incentives for SSI’s and tax concessions, assistance for obtaining raw material, machinery, land and building and technical assistance – industrial estate, role and types.	<b>10</b>
<b>PRACTICALS</b>		
Units	Topic	Hours
1	Preparation of a project report to start a SSI unit	2
2	Preparing a letter to the concerned authority – seeking licenses to the SS unit, you propose to start.	2
3	Format of a business plan	4
4	Survey of SSI unit	4
5	Chart showing financial assistance with rate of interest and tax concessions available to SSI .	4

**UNIVERSITY OF MYSORE**

**Choice based credit system of Bachelor's Degree Programme in Clinical Nutrition and Dietetics as one option**

<b>Semester</b>	<b>Sl. No.</b>	<b>Code No.</b>	<b>Type of the Paper</b>	<b>Title of the paper</b>	<b>Credit pattern in L:T:P</b>	<b>Credit Value</b>	<b>Hours/ Week L:T:P</b>	<b>Total Hours</b>
<b>I</b>	<b>1.</b>	<b>CND</b>	<b>DSC -I</b>	<b>Applied Life Science</b>	<b>3:1:2</b>	<b>6</b>	<b>3:2:4</b>	<b>9</b>
<b>II</b>	<b>2.</b>	<b>CND</b>	<b>DSC -II</b>	<b>Fundamentals of Nutrition</b>	<b>3:1:2</b>	<b>6</b>	<b>3:2:4</b>	<b>9</b>
<b>III</b>	<b>3.</b>	<b>CND</b>	<b>DSC -III</b>	<b>Elementary Food Science</b>	<b>3:1:2</b>	<b>6</b>	<b>3:2:4</b>	<b>9</b>
<b>IV</b>	<b>4.</b>	<b>CND</b>	<b>DSC -IV</b>	<b>Nutrition during Life Cycle</b>	<b>3:1:2</b>	<b>6</b>	<b>3:2:4</b>	<b>9</b>
<b>V</b>	<b>5.</b>	<b>CND</b>	<b>DSE -V</b>	<b>Dietetics-I</b>	<b>2:1:1</b>	<b>4</b>	<b>2:2:2</b>	<b>6</b>
	<b>6.</b>	<b>CND</b>	<b>DSE -VI</b>	<b>Food Service Management</b>	<b>2:1:1</b>	<b>4</b>	<b>2:2:2</b>	<b>6</b>
	<b>7.</b>	<b>CND</b>	<b>DSE-VII</b>	<b>Behavioral Nutrition</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
	<b>8.</b>	<b>CND</b>	<b>DSE-VIII</b>	<b>Nutritional Biochemistry</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
	<b>9.</b>	<b>CND</b>	<b>SEC - I</b>	<b>Culinary Science</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
	<b>10.</b>	<b>CND</b>	<b>SEC-II</b>	<b>Entrepreneurship</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
<b>VI</b>	<b>11.</b>	<b>CND</b>	<b>DSE -IX</b>	<b>Dietetics- II</b>	<b>2:1:1</b>	<b>4</b>	<b>2:2:2</b>	<b>6</b>
	<b>12.</b>	<b>CND</b>	<b>DSE -X</b>	<b>Project Work/Placement</b>	<b>2:1:1</b>	<b>4</b>	<b>2:2:2</b>	<b>6</b>
	<b>13.</b>	<b>CND</b>	<b>DSE-XI</b>	<b>Dietetic Techniques and Patient Counseling</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
	<b>14.</b>	<b>CND</b>	<b>DSE-XII</b>	<b>Public Health</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
	<b>15.</b>	<b>CND</b>	<b>SEC-III</b>	<b>Nutrition and Fitness</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
	<b>16.</b>	<b>CND</b>	<b>SEC-IV</b>	<b>Consumer Education</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>

**DSC-I: APPLIED LIFE SCIENCE**

**3+1+2=6 credits/week**

**3+2+4=9 hrs/week**

**UNIT 1: Introduction to human body**

A. Definition of Anatomy and Physiology, Body fluids.

B. Skeletal system – Functions, types of bones, growth of long bone

C. **Blood** composition, RBC, WBC, Platelets – structure, formation and function, coagulation of blood, blood groups and Rh factor, Heart – structure and function, circulation of blood and blood pressure 12

**UNIT 2: A. Digestive system**

Structure and functions, Process of digestion and absorption.

**B. Excretory system**

Structure and functions of Kidney and Nephron, Composition of urine 8

**UNIT 3: A Respiratory system**

Structure of lungs, gaseous exchange, Tissue respiration

**B. Organs of special senses -**

Tongue, Nose, Ear, Eye and Skin- Structure and function.

**C. Nervous system**

Brain and spinal cord – structure and function 12

**UNIT 4: A. Endocrine system**

Structure and functions – hypo and hyper secretory effect of pituitary, thyroid, parathyroid and the adrenal glands, Islets of Langerhans

**B. Reproductive system**

Male and female organs of reproduction- structure and function, puberty, menarche, mammary glands and menopause 16

**APPLIED LIFE SCIENCE - PRACTICALS**

**4hrs/week**

1. Identification of tissue slides – skeletal, digestive system, heart, lungs
2. Bleeding and clotting time (both methods)
3. Blood groups and Rh factor
4. Estimation of hemoglobin (Sahli's method)
5. Enumeration of RBC, WBC, Differential count of WBC
6. Determination of blood pressure (under various positions) – demonstration
7. Urine analysis – microscope observation, Ph, glucose and albumin
8. Spotters-Instruments, reagents and Cellular component of Blood
9. Visit to anatomy and pathology units

**DSC-II: FUNDAMENTALS OF NUTRITION****3+1+2=6****credits/week****3+2+4= hrs/week**

**UNIT 1: A. Energy-** forms of energy, sources and unit of measurements, Determination of energy content in foods (Bomb calorimeter), physiological fuel values, energy expenditure at rest (BMR/RMR), methods of determination of BMR. Factors affecting BMR.

**B. Recommended dietary allowances for Indians (ICMR)-**Brief knowledge of derivation of RDA, its applications and limitations, Food groups and their uses.

**B. Carbohydrates-** Classification (available, non-available), dietary sources, functions 14

**UNIT 2: A. Lipids-** classification, sources, composition, distribution – visible and invisible, functions, Essential fatty acids and cholesterol - sources, function and health implications.

**B. Proteins -** Classification, essential and non-essential amino acids, sources- animal / vegetable protein for growth and maintenance.

8

**UNIT 3: Minerals**

Classification, functions, sources, dietary requirements, biological availability, body stores, effects of deficiency, toxicity of – Calcium, Phosphorous, Iron, Copper, Iodine, Fluoride, Zinc, Chromium, Magnesium.

12

**UNIT 4: Vitamins**

Classification, functions, sources, dietary requirements, biological availability, body stores, effects of deficiency, toxicity of – Fat soluble vitamins – A, D,E,K and water soluble vitamins – Thiamine, Niacin, Riboflavin, Folic acid, Vitamin B<sub>12</sub> and Ascorbic acid.

14

**FUNDAMENTALS OF NUTRITION- PRACTICALS****4 hrs/Week**

1. Food groups: calculation of mean energy, carbohydrates, protein, fat and dietary fiber content of foods using ICMR Tables. Preparation of a table for all the food groups and identification of their role to Indian diet.

2. Standardization of household measures and hand measures- dry and liquid measures.

3. Identification and preparation of macro and micro nutrient dense recipes and calculation of nutrient contents for the same.

4. Determination of edible portions of fruits and vegetables as purchased from the market. Calculation of percent edible portion and its nutrient content.

**DSC-III: ELEMENTARY FOOD SCIENCE**

**3+1+2=6 credits/week**

**3+2+4=9 hrs/week**

**UNIT 1: A. Cereal and cereal products** - Structure and composition of rice and wheat grains, Starch, nature and effect of cooking.

**B. Legumes and oilseeds**- Structure of bean seeds, Composition of legumes, Factors affecting the cooking quality of pulses, Oilseed meal and their products

**C. Fats and oils**- Physico-chemical properties of fats and oils, Functions of fat in food, Importance of smoking point and its application, Rancidity in fats substitutes/ specialty fats

14

**UNIT 2: A. Vegetables and fruits** - Classification of fruits and vegetables, Effects of cooking on color, texture and acceptability, Browning reaction and its prevention

**B. Sugar and confectionary** - Crystallization of sugar and its application in food preparations 10

**UNIT 3: Eggs, Meat, poultry and fish**

a) Structure, composition of egg, muscle and meat quality

b) Factors affecting the quality and grading for quality of egg

c) Effect of cooking on egg quality

d) Use of eggs in Indian preparation

e) Post-mortem changes

f) Factors to be considered in selection and preparation of meat, poultry and fish

12

**UNIT 4: Milk and milk products**

a) Composition of milk

b) Factors affecting the quality

c) Use of milk and its products

12

**ELEMENTARY FOOD SCIENCE - PRACTICAL 4 hours/week**

**1. Cereals** -(a) Microscopic examination of starch molecules, Gelation of cereal flours

**2. Pulses** – Effect of soaking, addition of acid and alkali on cooking quality.

**3. Vegetable and fruits** – Effect of adding acid and alkali on green, red, yellow and white vegetables, Methods of preventing browning

**4. Eggs** -Demonstration of grading eggs for quality, Ferrous sulphate formation and prevention

5. **Oils** – Smoking points of oils and its uses.

6. **Milk and milk products** –Separation of cream and preparation of paneer and khola (demonstration)

7. **Sugar cookery** – Stages of crystallization and its uses.

**DSC-IV: NUTRITION DURING LIFE CYCLE**

**3+1+2 credits/week**

**3+2+4 hrs/week**

**UNIT 1: A. Food habits of family and community-**

Factors affecting food habits

**B. Nutrition during pregnancy and lactation**

a) Pregnancy – physiological stages of pregnancy, complications of pregnancy, nutritional requirements, food selection.

b) Lactation – physiology of lactation, nutritional requirements.

14

**UNIT 2: Nutrition during infancy and early child hood**

a) Infancy – Growth and development, nutritional requirements, breast feeding, infant formula, Weaning and supplementary foods.

b) Early child hood – (toddler / preschool) growth and nutrients requirements, feeding patterns.

10

**UNIT 3: Nutrition during school years and adolescence**

a) School children – Nutritional requirement – Importance of snacks, school lunch, Nutritional problem in school age child.

b) Adolescence – growth and nutrient needs, food choices, eating habits, factors influencing.

14

**UNIT 4: Nutrition of adults and elderly**

a) Adult hood – food and nutrient requirements.

b) Elderly – Factors affecting food and nutrient use. Nutrient needs. Nutrition related problems.

10

**NUTRITION DURING LIFE CYCLE - PRACTICAL      2hrs/week**

**1. Nutritional anthropometry –**

- a) Taking measurement of height, weight and mid arm circumference of individual student in the class and comparing them with norms.
- b) Taking the above measurement on pre-school children of nursery school and comparing with NCHS standard, interpretation of data.

**2. Planning, calculation and evaluation**

Normal diets for adults (men and women) pregnant women, lactating women, elderly, pre- school adolescent (boys and girls) family.

**3. Planning, preparation and evaluation**

Different types of weaning food and comparing with commercial weaning foods in terms of nutritive value and cost.

- 4. Visit to Anganwadi and other community centers to observe their activities.

**DSE-V DIETETICS— I**

**I2+1+1=4 credits**

2+2+2=

6hrs/week

**UNIT 1:** Methods to assess nutritional status. Direct methods – Diet surveys, anthropometry, clinical and biochemical assessments. Indirect methods-food balance sheet and agriculture data and vital statistics. **08**

**UNIT 2**

- a. Fundamentals of diet therapy – Definition of normal and therapeutic diets. Routine hospital diets – fluid diets, soft diets, and regular hospital diets.
- b. Special feeding methods-oral feeding, enteral feeding, parental feeding techniques **10**

**UNIT 3:** a. Diet in the diseases of the gastro intestinal tract – aetiology, symptoms, and diagnostic tests. Treatment and dietary modification:

- a Gastritis, peptic ulcer.
- b Diarrhea and constipation.
- c Celiac disease, mal absorption syndrome.
- d Irritating bowel syndrome, stettatorrhoea, ulcerative colitis **10**

**UNIT 4: a)** Diet in - fevers and infections, dengue, AIDS, H1N1

- b) Diet in burns and surgical conditions **04**
- c) cancer

**PRACTICALS**

2hrs/week.

1.Assessing nutritional status: measuring height and weight of college students and comparing with the standards.

**Planning and preparation of:**

1. Clear fluid and full fluid diet
2. Diet for fevers/burns/surgical condition
3. Bland diet for peptic ulcer
4. High and low calorie diets.
5. High and low fibre diet.

**DSE\_VI - FOOD SERVICE MANAGEMENT**  
credits/week

2+1+1=4

2+2+2=6

hrs/week

**UNIT 1:** a. Organization of food service management – Definition, Various types of Food Service institutions, their characteristics and functions. a. Commercial – Hostel, Canteen, Cafeteria, b. Welfare – Hospitals, hostels, boarding homes, home for children/elderly and industrial canteen. C. Transport – Air, Rail, Sea.

b. Types of organization, tools of management, administration, leadership, problems. **08**

**UNIT 2:** a. Equipment in Food service – Classification, Factors to be considered in selection of equipment for food storage, preparation, serving, dish washing & laundering.  
b. Physical layout – Planning a food service unit, layout design, planning of different work areas – preparation, cleaning, storing, serving and dining areas.  
Lighting and ventilation, working heights in relation to equipment.  
Plant and equipment management – maintenance, sanitation, safety and security. **10**

**UNIT 3:** a. Menu Planning –Principles involved in menu planning, different kinds of menus. Budgeting and cost control, Total budget – food budgets, labor cost and overheads. Definition for cost Control, food cost, factors to be considered in cost control, selling price, total income inventories, records for indenting food receipts and issues.  
b. Quality food Service – types-Centralized, de-centralized objectives. Styles of service. **10**

**UNIT 4:** Personnel Management- selection, training and supervision of personnel, labour policies and legislation. **06**

## **PRACTICALS**

**2hrs/week**

### **1. Preparation and service of –**

- a. Indian dishes – cereals, pulses & vegetables based preparations, Sweets and desserts.
- b. Western – soups, sauces, entrees, bakery products, types of icing, beverages.
- c. Table setting and service.

2. **Visit to the following institutions** to observe organization and management of food services and write a report with an emphasis on the following aspects – Physical Layout, equipment, personnel, purchasing, storage, preparation, service, hygiene and sanitation in hotel, industrial canteen, hostel boarding home, railway canteens (any three).

**DSE-VII**  
credits/week

## **BEHAVIORAL NUTRITION**

1+1+0=2

1+2+0=3 hrs/week

Unit- I a. Food behaviour concept

-factors affecting food behaviour

agricultural, economic, environmental, sociocultural, psychological, religious. Role of industrialisation, urbanization, work patterns and mass media

5

Unit;2 a.Food-Facts,fallacles and beliefs—Identifying positive neutral and negative implications 3

Unit 3.a.Dietery patterns-Ffactors affecting food intake,food waste,prejudies and aversions,KAP of individual and families-regional variations and nutritional implications. 4

Unit;4 a. Modifying food behaviour in different age groups

Intervension strategies and implementation-case studies

b. Role of different members of family in changing food behaviour 2

-Parents,siblings,role models

c. Legislation,health and nutrition education

Role of media in changing food behaviour 4

**DSE-VIII**                      **NUTRITIONAL BIOCHEMITRY**                      1+1+0=2  
credits/week

1+2+0=3 hrs/week

Unit 1 Enzymes- a)Definition,types,and classification of enzymes,definition and types

of coenzymes, specificity of enzymes,isozymes,enzyme kinetics,includind factors affecting velocity of enzyme catalized reactions, enzyme inhibition.

b. Molicular aspects of transport-Passive diffution,facilitated diffusion,active

Transport 06

Unit 2; Intermediary metabolism-General consideration.

a.Carbohydrate glycolysis,gluconeogenesis,glycogenesis,glycogenolysis blood sugar regulation

b.Lipids-oxidation and biosynthesis of fatty acids,synthesis and utilization of ketone bodies,ketosis,fatty livers.

c.proteins-general reactions of amino acid metabolism,urea cycle

e.Lipoproteins-types,composition,role and significance in diseases. 08

UNIT 3: a)Fluid ,electrolyte and Acid-Base balance 02

**SEC-I CULINARY SCIENCE**

1+1+0=2 credits/week

1+2+0=3 hrs/week

**UNIT 1: Indian Cuisines**

- A. Preparation of three course simple Indian menus: Including Starters, Main course dishes including meat and fish, Accompaniments like rice preparations and dal preparations, Dessert preparations
- B. Preparation of Indian snacks / high tea items – Indiansnacks which should include North Indian, South Indian West and East Indian popular items. 3

**UNIT 2: Indian Breakfast and Sweets**

- A. Preparation of Indian breakfast –Indian breakfast which should include North Indian, South Indian West and East Indian popular items.
- B. Preparation of Indian Sweets and Confectionary products – Indian breakfast which should include North Indian, South Indian West and East Indian popular items.
- C. Preparation of Gravies - Indian basic gravies which should include Vegetarian and non-vegetarian popular items. 5

**UNIT 3: British and Italian Cuisine**

- A. British-Popular preparations like Yorkshire pudding, Cockaleekie soup, Scotch broth, Irish stew, Welh rarebit, Fish and Chips, Jugged meat, Cornish pasties, Steak and Kidney pie, Sheperd’s pie, Toad in the Hole, Haggis, Kippers and Sweet dishes like Fool, Trifle, Crumpet and Lemon curd.
- B. Italian Cuisine-Rice preparations like varieties of Risotto, varieties of Pasta, Anti pasto, Gnocchi, Bruschetta, Cacciatora, Soups like Minestrone and Osso bucco, Insalata, Calabrese, Fritata, Friccacea, Cassata, Tiramisu and Zabaglione. 4

**UNIT 4: French and Spanish Cuisine**

- A. French: Popular preparations like Quiche Lorraine, Meat Bourguignon, Coq au vin, Ratatouille, Meat Casserole, Bouillabaisse, French Onion soup, Chicken Normandy, Vegetable crepes, Pommes parsley, Vegetable Au gratin, Bouquetiere legumes, Chicken ala king, Consomme, RizPilaf, Pommes lyonnaise, Pommes Duschesse, Steak sautéBercy, Waldorf Salad, Ouefs farcis chimay, Grilled fish withHollandaise, Crepe Suzzete and Crème Caramel
- B. Spanish Cuisine:Gazpacho,Sopa De Ajo Caldo Verde, Cocido Madrilenno,Paella, Churros, Pollo En Pepitoria, Fritata De Patata, Pastel, De Manzana, Sangria 4

**SEC-II ENTREPRENEURSHIP 1+1+0-2 credits/week**

1+2+0=3 hrs/week

**UNIT 1:Importance of entrepreneurship and its relevance in career growth.**

- Entrepreneur, entrepreneurship and enterprise, Types of enterprise, Charms of being anentrepreneur,Creativity and innovation and Problem solving. 2



UNIT 4: Diet in kidney diseases – etiology , symptoms, diagnostic test and dietary management during :

- a. Glomerular nephritis, Nephrosis- acute and chronic conditions
- b. Renal failure-acute and chronic . Dialysis
- c. Renal calculi – causes, symptoms and diet management

Practicals

2hrs/week

- 1. Planning and preparation of diets for:
  - a. Viral hepatitis and cirrhosis of the liver.
  - b. Diabetes mellitus
  - c. Cardio-vascular diseases
  - d. Renal
  - e. Phenylketonuria
  - f. Gout
- 2. Ketone diet
- 3. Case study and diet history of diseases.

**DSE- X Project/Placement/Internship**

**2+1+1=4credits/week**

- 1. Internship in a hospital, hostel, hostel/canteen and preparation of a project report.

Presentation and Viva Voce

**DSE – XI:DIETETICS TECHNIQUES AND PATIENT COUNSELLING**  
**1+1+0=2credits/week**

**1+2+0=3hrs/week**

Unit 1: Dieticians as part of the medical team and outreach services.

Unit 2: Medical history assessment- techniques of obtaining relevant information for patient profiles

Unit 3: Dietary diagnosis and tests for nutritional status – correlating clinical and dietary information.

Unit 4- Patient education and counselling- assessment of patients needs, establishing rapport, counselling relationship, resources and aids to counselling

Unit 5- Aesthetic attributes of diets.

Unit 6- Follow up visits and patients education.

**DSE-XII PUBLIC HEALTH  
CREDITS/WEEK**

**1+1+0=2**

**1+2+0= 3HRS/WEEK**

Unit 1: Health and Dimensions of Health:

Positive health verses absence of diseases

2

Unit 2 : Community and its organisation

Concept of community, types of community, factors affecting health of community – environmental, social, cultural, dietary, organisational, economic, political. Vulnerable groups/ needs of special population.

3

Unit 3: Community health through the life span

Vital statistics and their significance

2

Unit 4: Communicable and infectious disease control

- a) Nature of communicable and infectious disease, infection, contamination, disinfections, decontamination, transmission- direct and indirect, vector borne disease, epidemiology of infection, infecting organism, and causative agents- their microbiology, environmental measures and epidemiologic principles of disease control.
- b) Preventive and promotive aspects, public education and action, alcohol, cigarette smoking, drugs, aids, STD, diet and chronic diseases.

9

**SEC-III: NUTRITION AND FITNESS**

**1+1+0=2credits/week**

**1+2+0=3hrs/week**

**UNIT 1: Understanding Fitness**

- Definition of fitness, health and related terms
  - Assessment of fitness
  - Approaches for keeping fit

**UNIT 2: Importance of nutrition**

- Role of nutrition in fitness• Nutritional guidelines for health and fitness
- Nutritional supplements

**UNIT 3: Importance of Physical activity**

- Importance and benefits of physical activity
- Physical Activity – frequency, intensity, time and type with examples
  - Physical Activity Guidelines and physical activity pyramid

**UNIT 4: Weight Management**

- Assessment, etiology, health complications of overweight and obesity
- Diet and exercise for weight management
- Fad diets
- Principles of planning weight reducing diets

c) **SEC-IV: CONSUMER EDUCATION**

**1+1+0=2credits/week**

**1+2+0=3hrs/week**

**-UNIT 1: A. Consumption Economics**

Meaning and definitions, Family as a decision making unit of household, consumer- definition, Consumer-definition, consumerism, rights and responsibilities of consumers-rights to safety to choose, to be heard, to be informed, to redress and to healthy environment

**B. Market**

- Definition -Types of markets-segmentation and characteristics
- Functions
- Channels of distribution

**UNIT 2: A. Business Cycles**

- Monitory theories of business cycles
- Non-monetary theories of business cycle
- Implications for consumption

**B. Consumer and the Law**

Types-basic, social, statutory and their implications

**UNIT 3: A. Consumer in the Market**

Consumer buying habits: convenience goods, especially goods Buying motives: Primary, selective, rational, emotional and patronage Consumer product and promotion practices

- Types of products
- Advertisement, sales promotion, packaging
- Public utilities-names and important types, common problems and solutions

**B. Consumer Buying Problems**

Adulteration, faulty weights and measures, other malpractices in market, pricing, Legal-guarantee and warrantee contracts, instalment buying

**UnIT 4:A. Consumer Decision making**

Good buymanship

Factors affecting consumer decisions

**B. Consumer protection services**

Organizations

Legislation-important laws for consumer protection

Consumer representation

## UNIVERSITY OF MYSORE

### Choice based credit system of Bachelor's Degree Programme in Food Science and Nutrition as one option

<b>Semester</b>	<b>Sl. No.</b>	<b>Code No.</b>	<b>Type of the Paper</b>	<b>Title of the paper</b>	<b>Credit pattern in L:T:P</b>	<b>Credit Value</b>	<b>Hours/Week L:T:P</b>	<b>Total Hours</b>
<b>I</b>	<b>1.</b>	<b>FSN</b>	<b>DSC –I</b>	<b>Human Physiology</b>	<b>3:1:2</b>	<b>6</b>	<b>3:2:4</b>	<b>9</b>
<b>II</b>	<b>2.</b>	<b>FSN</b>	<b>DSC –II</b>	<b>Principles of Nutrition</b>	<b>3:1:2</b>	<b>6</b>	<b>3:2:4</b>	<b>9</b>
<b>III</b>	<b>3.</b>	<b>FSN</b>	<b>DSC –III</b>	<b>Food Commodities</b>	<b>3:1:2</b>	<b>6</b>	<b>3:2:4</b>	<b>9</b>
<b>IV</b>	<b>4.</b>	<b>FSN</b>	<b>DSC –IV</b>	<b>Family Nutrition</b>	<b>3:1:2</b>	<b>6</b>	<b>3:2:4</b>	<b>9</b>
<b>V</b>	<b>5.</b>	<b>FSN</b>	<b>DSE –V</b>	<b>Food Product Development</b>	<b>2:1:1</b>	<b>4</b>	<b>2:2:2</b>	<b>6</b>
	<b>6.</b>	<b>FSN</b>	<b>DSE –VI</b>	<b>Assessment of Nutritional Status</b>	<b>2:1:1</b>	<b>4</b>	<b>2:2:2</b>	<b>6</b>
	<b>7.</b>	<b>FSN</b>	<b>DSE-VII</b>	<b>Food Chemistry</b>	<b>1:1:1</b>	<b>3</b>	<b>1:2:2</b>	<b>5</b>
	<b>8.</b>	<b>FSN</b>	<b>DSE-VIII</b>	<b>Food Service Management</b>	<b>1:1:1</b>	<b>3</b>	<b>1:2:2</b>	<b>5</b>
	<b>9.</b>	<b>FSN</b>	<b>SEC – I</b>	<b>Culinary Science</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
	<b>10.</b>	<b>FSN</b>	<b>SEC-II</b>	<b>Entrepreneurship</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
<b>VI</b>	<b>11.</b>	<b>FSN</b>	<b>DSE –IX</b>	<b>Food Processing and Preservation</b>	<b>2:1:1</b>	<b>4</b>	<b>2:2:2</b>	<b>6</b>
	<b>12.</b>	<b>FSN</b>	<b>DSE –X</b>	<b>Project/Placement</b>	<b>2:1:1</b>	<b>4</b>	<b>2:2:2</b>	<b>6</b>
	<b>13.</b>	<b>FSN</b>	<b>DSE–XI</b>	<b>Community Nutrition</b>	<b>1:1:1</b>	<b>3</b>	<b>1:2:2</b>	<b>5</b>
	<b>14.</b>	<b>FSN</b>	<b>DSE-XII</b>	<b>Dietetics</b>	<b>1:1:1</b>	<b>3</b>	<b>1:2:2</b>	<b>5</b>
	<b>15.</b>	<b>FSN</b>	<b>SEC-III</b>	<b>Nutrition and Fitness</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>
	<b>16.</b>	<b>FSN</b>	<b>SEC-IV</b>	<b>Consumer Education</b>	<b>1:1:0</b>	<b>2</b>	<b>1:2:0</b>	<b>3</b>

**DSC-I: HUMAN PHYSIOLOGY****3+1+2=6 credits/week****3+2+4=9 hrs/week****UNIT 1: Introduction to human body**

A. Definition of Anatomy and Physiology, Body fluids.

B. Skeletal system – Functions, types of bones, growth of long bone

**C. Blood** composition, RBC, WBC, Platelets – structure, formation and function, coagulation of blood, blood groups and Rh factor, Heart – structure and function, circulation of blood and blood pressure

12

**UNIT 2: A. Digestive system**

Structure and functions, Process of digestion and absorption.

**B. Excretory system**

Structure and functions of Kidney and Nephron, Composition of urine

10

**UNIT 3: A Respiratory system**

Structure of lungs, gaseous exchange, Tissue respiration

**B. Organs of special senses -**

Tongue, Nose, Ear, Eye and Skin- Structure and function.

**C. Nervous system**

Brain and spinal cord – structure and function

12

**UNIT 4: A. Endocrine system**

Structure and functions – hypo and hyper secretory effect of pituitary, thyroid, parathyroid and the adrenal glands, Islets of Langerhans

**B. Reproductive system**

Male and female organs of reproduction- structure and function, puberty, menarche, mammary glands and menopause

**14****HUMAN PHYSIOLOGY - PRACTICALS****4hrs/week**

1. Identification of tissue slides – skeletal, digestive system, heart, lungs
2. Bleeding and clotting time (both methods)
3. Blood groups and Rh factor
4. Estimation of hemoglobin (Sahli's method)
5. Enumeration of RBC, WBC, Differential count of WBC
6. Determination of blood pressure (under various positions) – demonstration
7. Urine analysis – microscope observation, Ph, glucose and albumin
8. Spotters-Instruments, reagents and Cellular component of Blood
9. Visit to anatomy and pathology units

**DSC-II: PRINCIPLES OF NUTRITION****3+1+2=6 credit/week****3+2+4=9 hrs/week**

**UNIT 1: A. Energy-** forms of energy, sources and unit of measurements, Determination of energy content in foods (Bomb calorimeter), physiological fuel values, energy expenditure at rest (BMR/RMR), methods of determination of BMR. Factors affecting BMR.

**B. Recommended dietary allowances for Indians (ICMR)**-Brief knowledge of derivation of RDA, its applications and limitations, Food groups and their uses.

**B. Carbohydrates-** Classification (available, non-available), dietary sources, functions

14

**UNIT 2: A. Lipids-** classification, sources, composition, distribution – visible and invisible, functions, Essential fatty acids and cholesterol - sources, function and health implications.

**B. Proteins -** Classification, essential and non-essential amino acids, sources- animal /vegetable protein for growth and maintenance. 8

### **UNIT 3: Minerals**

Classification, functions, sources, dietary requirements, biological availability, body stores, effects of deficiency, toxicity of – Calcium, Phosphorous, Iron, Copper, Iodine, Fluoride, Zinc, Chromium, Magnesium.

12

### **UNIT 4: Vitamins**

Classification, functions, sources, dietary requirements, biological availability, body stores, effects of deficiency, toxicity of – Fat soluble vitamins – A, D,E,K and water soluble vitamins – Thiamine, Niacin, Riboflavin, Folic acid, Vitamin B<sub>12</sub> and Ascorbic acid.

14

## **PRINCIPLES OF NUTRTION- PRACTICALS 4 hrs/Week**

1. Food groups: calculation of mean energy, carbohydrates, protein, fat and dietary fiber content of foods using ICMR Tables. Preparation of a table for all the food groups and identification of their role to Indian diet.
2. Standardization of household measures and hand measures- dry and liquid measures.
3. Identification and preparation of macro and micro nutrient dense recipes and calculation of nutrient contents for the same.
4. Determination of edible portions of fruits and vegetables as purchased from the market. Calculation of percent edible portion and its nutrient content.

## **DSC-III: FOOD COMMODITIES**

**3+1+2=6 credits/week**

**3+2+4=9 hrs/week**

**UNIT 1: A. Cereal and cereal products** - Structure and composition of rice and wheat grains, Starch,

nature and effect of cooking.

**B. Legumes and oilseeds-** Structure of bean seeds, Composition of legumes, Factors affecting the cooking quality of pulses, Oilseed meal and their products

**C. Fats and oils-** Physico-chemical properties of fats and oils, Functions of fat in food, Importance of smoking point and its application, Rancidity in fats substitutes/ specialty fats

14

**UNIT 2: A. Vegetables and fruits** - Classification of fruits and vegetables, Effects of cooking on color,

texture and acceptability, Browning reaction and its prevention

**B. Sugar and confectionary** - Crystallization of sugar and its application in food preparations 10

**UNIT 3: Eggs, Meat, poultry and fish**

a) Structure, composition of egg, muscle and meat quality

b) Factors affecting the quality and grading for quality of egg

c) Effect of cooking on egg quality

d) Use of eggs in Indian preparation

e) Post-mortem changes

f) Factors to be considered in selection and preparation of meat, poultry and fish

12

**UNIT 3: Milk and milk products**

a) Composition of milk

b) Factors affecting the quality

c) Use of milk and its products

12

### **FOOD COMMODITIES - PRACTICAL 4 hours/week**

**1. Cereals** -(a) Microscopic examination of starch molecules, Gelation of cereal flours

**2. Pulses** – Effect of soaking, addition of acid and alkali on cooking quality.

**3. Vegetable and fruits** – Effect of adding acid and alkali on green, red, yellow and white vegetables, Methods of preventing browning

**4. Eggs** -Demonstration of grading eggs for quality, Ferrous sulphate formation and prevention

**5. Oils** – Smoking points of oils and its uses.

**6. Milk and milk products** –Separation of cream and preparation of paneer and khola (demonstration)

**7. Sugar cookery** – Stages of crystallization and its uses.

**DSC-IV:**

**FAMILY NUTRITION**

**3+1+2= 6credits/week**

**3+2+4=9 hrs/week**

**UNIT 1: A. Food habits of family and community-**

Factors affecting food habits

**B. Prevalence of nutrition problems and intervention programmes**

i. Prevalence of nutritional problems in India with special reference to pre-school children and women, Energy protein malnutrition. Nutritional Anaemia, deficiencies of

vitamin A, Iodine, Fluorine.

ii. Nutritional intervention programmes – Supplementary feeding. School lunch, Anemia and vitamin A prophylaxis, Goiter control programmes, Integrated Child Development service. Nutrition and health Education, Food supplementation, Fortification and enrichment

16

**UNIT 2: Nutrition during pregnancy and lactation**

a) Pregnancy – physiological stages of pregnancy, complications of pregnancy, nutritional requirements, food selection.

b) Lactation – physiology of lactation, nutritional requirements.

10

**UNIT 3: A. Nutrition during infancy and early child hood**

a) Infancy – Growth and development, nutritional requirements, breast feeding, infant formula, Weaning and supplementary foods.

b) Early child hood – (toddler / preschool) growth and nutrients requirements, feeding patterns.

**B. Nutrition during school years and adolescence**

a) School children – Nutritional requirement – Importance of snacks, school lunch, Nutritional problem in school age child.

b) Adolescence – growth and nutrient needs, food choices, eating habits, factors influencing.

14

#### **UNIT 4: Nutrition of adults and elderly**

- a) Adult hood – food and nutrient requirements.
- b) Elderly – Factors affecting food and nutrient use. Nutrient needs. Nutrition related problems.

8

#### **FAMILY NUTRITION - PRACTICAL**

**4hrs/week**

##### **1. Nutritional anthropometry –**

- a) Taking measurement of height, weight and mid arm circumference of individual student in the class and comparing them with norms .
- b) Taking the above measurement on pre-school children of nursery school and comparing with NCHS standard, interpretation of data.

##### **2. Planning, calculation and evaluation**

Normal diets for adults (men and women) pregnant women, lactating women, elderly, pre- school adolescent (boys and girls) family.

##### **3. Planning, preparation and evaluation**

Different types of weaning food and comparing with commercial weaning foods in terms of nutritive value and cost.

4. Visit to Anganwadi and other community centers to observe their activities.

**DSE-V:**

**FOOD**

**PRODUCT**

**DEVELOPMENT**

**2+1+1=4credits/week**

**2+2+2=6 hrs/week**

##### **UNIT 1: A. Food needs and consumer preferences**

Needs and types of foods consumption trends. Economic, psychological, anthropological and sociological dimensions of food consumption.

##### **B. Trends in social change and its role in diet pattern**

Consumer research and the market. Identifying the need for new products

##### **UNIT 2: A. Designing new products**

Using the need based perspective, and applications in various situations. The R & D process

##### **B. Developing standard products**

Types of products and logistics. Processing-primary and secondary, various food ingredients used, use of food additives.

##### **UNIT 3: A. Chemical and Physical properties of foods**

Shelf life studies

##### **B. Packaging –suitability, development of the package, management**

Design and package graphics, labelling, research and testing

##### **UNIT 4: A. Storage and Transportation**

Types and mode of transportation, optimization of transport taking into account the type of product, distance, storage facilities

##### **B. Standardization and large scale preparation**

##### **C. Safety and regulatory aspects, sanitation and waste disposal**

**1. Need for new products**

Identifying areas/subgroups/programmes where new food products are required or can be useful through-market survey, visit to a community nutrition programme

**2. Listing variety of possible food products**

Establishing selection criteria and target group. Selecting a food product for development

**3. Planning for the food product to be developed**

Processing steps, ingredients required, equipment required, standardization, evaluation, large scale preparation, packaging and shelf life studies. Drawing up a working plan and time schedule

**4. Standardization of the food product and conducting sensory evaluation**

**5. Tests that can be used to test quality and shelf life of the product, packaging the food product and labelling**

**6. Visits to commercial food manufacturing, packaging as well as R&D Units where food products are developed and tested.**

**DSC-VI: ASSESSMENT OF NUTRITIONAL STATUS**

**2+1+1=4credits/week**

**2+2+2=6 hrs/week**

**UNIT 1: A. Nutritional status assessment and surveillance**

Meaning, need, objectives and importance

**B. Direct nutritional assessment of human groups**

Clinical signs, nutritional anthropometry, biochemical tests, biophysical

methods

**UNIT 2: A. Diet surveys**

Need and importance, methods of dietary survey. Interpretation-concept of consumption unit, intra and inter individual distribution in family. Adequacy of diet with respect to RDA, concept of family food security.

**B. Clinical signs**

Need and importance, identifying signs of PEM, Vitamin A deficiency and iodine deficiency. Interpretation of descriptive list of clinical signs

**UNIT 3: A. Nutritional Anthropometry**

Need and importance, standards of reference, techniques of measuring height, weight, head, chest and arm circumference, interpretation of these measurements and use of growth charts.

Rapid Assessment Procedures-need and importance, technique interpretation

**UNIT 4: A. Secondary Sources of community health data**

Sources of relevant vital statistics, importance of infant, child and maternal mortality rates. Epidemiology of nutritional related diseases.

**B. Sociological factors in the etiology and prevention of malnutrition**

Food production and availability, cultural influences, socio-economic factors, food consumption, conditioning infections, medical and educational services, psychosocial, emergency/disaster conditions. Example-Floods, War

**ASSESSMENT OF NUTRITIONAL STATUS – PRACTICALS**

**2hrs/week**

## 1. Anthropometry

Measurement of infant length, height, weight, circumference measurements, head, chest, mid-upper arm, waist, hip, precautions to be taken. Accuracy, precision and reliability of measurements. Intra and inter observer variability and errors. Tools used and sensitivity.

## 2. Comparison with norms and interpretation to assess nutritional

- Status (weight for age, height for age, weight for height, MUAC)
- Z-scores, standard deviation, BMI, waist to hip ratio and significance

## 3. Tests for body composition-Methods in brief and significance

- Measurement of fat using skinfold thickness
- Growth charts-plotting of growth charts. Growth monitoring and promotion

## 4. Clinical assessment and signs of nutrient deficiency for the following-PEM

(Kwashiorkor, Marasmus), Vitamin A, Anemia, Rickets, B-Complex deficiencies

## 5. Biochemical parameters commonly used for assessing nutritional status

- Norms and cut-off points for desirable, at risk/deficiency
- Proteins-Total protein, albumin, transferrin, haemoglobin, ferritin
- TIBC, UIBC, plasma iron. Vitamins-Fat soluble and water soluble
- Minerals, Lipids

## 6. Estimating food and nutrient in take-

Household food consumption data, per consumption unit, 24 hours dietary recall, 24 hour record, Weighment method, food diaries, food frequency data.

DSC-VII: **FOOD CHEMISTRY**

**1+1+1=3credits/week**

**1+2+2=5hrs/week**

## UNIT 1: Carbohydrates

- Definition, classification, structure and properties of Monosaccharides, Disaccharides, Polysaccharides
- Glycolysis, Gluconeogenesis, glycogenesis, glycogenolysis, blood sugar regulation

## UNIT 2: Lipids

- Definition and classification, types and properties of fatty acids, composition and properties of fats, significance of acid value, iodine value and saponification value
- Classification and structure of phospholipids, structure of glycolipids, types and structure of sterols
- Oxidation and biosynthesis of fatty acids. Synthesis and utilization of ketone bodies, ketosis, fatty livers

## UNIT 3: Proteins

- Definition, classification, structure and properties of amino acids, essential and non-essential amino acids
- Definition, classification, structure, properties and functions of proteins
- General reactions of amino acid metabolism, urea cycle

## UNIT 4: A. Enzymes

Definition, types and classification of enzymes and coenzymes, specificity of enzymes, Isozymes, enzyme kinetics including factors affecting velocity of enzyme catalyzed reactions, enzyme inhibition.

## B. Biological Oxidation-Citric acid cycle, Electron transport chain

Oxidative phosphorylation, energy conservation, high energy phosphate bond.

**FOOD CHEMISTRY-PRACTICALS**

**2hrs/week**

## 1. Carbohydrates

- Reactions of mono, di and polysaccharides and their identification in unknown mixture
- Estimation of reducing and total sugars in foods
- Estimation of lactose in milk

## 2. Fats

- Reactions of fats and oils
- Determination of acid value, saponification and Iodine number of natural fats and oils
- Estimation of crude fat content of foods by Soxhlet's method

## 3. Proteins

- Reactions of proteins in foods
- Reactions of amino acids and their identification in unknown mixtures
- Estimation of total N of foods by Kjeldahl method

## 4. Enzymes-Effect of pH and temperature on enzyme activity-amylase on starch, pepsin on proteins and lipase on fats

### DSC-VIII: FOOD SERVICE MANAGEMENT

1+1+1=3credits/week

1+2+2= 5hrs/week

#### UNIT 1: a. Organization of food service management functions.

- a. Commercial – Hostel, Canteen, Cafeteria, b. Welfare – Hospitals, hostels, boarding homes, home for children/elderly and industrial canteen. C. Transport – Air, Rail, Sea.
- b. Types of organization, tools of management, administration, leadership, problems.

#### UNIT 2: a. Equipment in Food service

- Classification, Factors to be considered in selection of equipment for food storage, preparation, serving, dish washing & laundering.
- b. Physical layout** – Planning a food service unit, layout design, planning of different work areas – preparation, cleaning, storing, serving and dining areas. Lighting and ventilation, working heights in relation to equipment. Plant and equipment management – maintenance, sanitation, safety and security.

#### UNIT 3: a. Menu Planning

- Principles involved in menu planning, different kinds of menus. Budgeting and cost control, Total budget – food budgets, labor cost and overheads. Definition for cost Control, food cost, factors to be considered in cost control, selling price, total income inventories, records for indenting food receipts and issues.
- b. Quality food Service** – types-Centralized, de-centralized objectives. Styles of service.

#### UNIT 4: A a. Sensory testing of food quality

- i. Threshold test, ii. Difference test, iii. Ranking.
- iv. Scoring v. Hedonic vi. Acceptance and preferences tests
- b. Factors affecting food acceptance**

**B. Personnel Management-** selection, training and supervision of personnel, labour policies and legislation.

**FOOD SERVICE MANAGEMENT –PRACTICALS**

**2hrs/week**

**3. Preparation and service of –**

- d. Indian dishes – cereals, pulses & vegetables based preparations, Sweets and desserts.
- e. Western – soups, sauces, entrees, bakery products, types of icing, beverages.
- f. Table setting and service.

4. **Visit to the following institutions** to observe organization and management of food services and write a report with an emphasis on the following aspects – Physical Layout, equipment, personnel, purchasing, storage, preparation, service, hygiene and sanitation in hotel, industrial canteen, hostel boarding home, railway canteens (any three)

**SEC-I:**

**CULINARY**

**SCIENCES**

**1+1+0=2credits/week**

**UNIT 1: Indian Cuisines**

B. Preparation of three course simple Indian menus: Including Starters, Main course dishes including meat and fish, Accompaniments like rice preparations and dal preparations, Dessert preparations

B. Preparation of Indian snacks / high tea items – Indian snacks which should include North Indian, South Indian West and East Indian popular items.

**UNIT 2: Indian Breakfast and Sweets**

D. Preparation of Indian breakfast –Indian breakfast which should include North Indian, South Indian West and East Indian popular items.

E. Preparation of Indian Sweets and Confectionary products – Indian breakfast which should include North Indian, South Indian West and East Indian popular items.

F. Preparation of Gravies - Indian basic gravies which should include Vegetarian and non-vegetarian popular items.

**UNIT 3: British and Italian Cuisine**

C. British-Popular preparations like Yorkshire pudding, Cockaleekie soup, Scotch broth, Irish stew, Welh rarebit, Fish and Chips, Jugged meat, Cornish pasties, Steak and Kidney pie, Sheperd's pie, Toad in the Hole, Haggis, Kippers and Sweet dishes like Fool, Trifle, Crumpet and Lemon curd.

D. Italian Cuisine-Rice preparations like varieties of Risotto, varieties of Pasta, Anti pasto, Gnocchi, Bruschetta, Cacciatora, Soups like Minestrone and Osso bucco, Insalata, Calabrese, Fritata, Friccacea, Cassata, Tiramisu and Zabaglione.

**UNIT 4: French and Spanish Cuisine**

C. French: Popular preparations like Quiche Lorraine, Meat Bourguignon, Coq au vin, Ratatouille, Meat Casserole, Bouillabaisse, French Onion soup, Chicken Normandy, Vegetable crepes, Pommes parsley, Vegetable Au gratin, Bouquetiere legumes, Chicken ala king, Consomme, Riz Pilaf, Pommes lyonnaise, Pommes Duschesse, Steak sauté Bercy, Waldorf Salad, Ouefs farcis chimay, Grilled fish with Hollandaise, Crepe Suzzete and Crème Caramel

D. Spanish Cuisine: Gazpacho, Sopa De Ajo Caldo Verde, Cocido Madrilenio, Paella, Churros, Pollo En Pepitoria, Fritata De Patata, Pastel, De Manzana, Sangria

**SEC-II:ENTREPRENEURSHIP**    **1+1+0=2credits/week**  
**1+2+0=3hrs/week**

**UNIT 1: Importance of entrepreneurship and its relevance in career growth.**

Entrepreneur, entrepreneurship and enterprise, Types of enterprise, Charms of being an entrepreneur, Creativity and innovation and Problem solving.

**UNIT 2: a Small scale industry sector and its role in economic Development.** Planning a small scale industry. Schemes and assistance of Support agencies – banks, SFC, etc. Perceiving a business opportunity, Identification and selection of business.

**b. Management of Working Capital** – Concept of working capital. Factors to be controlled, Tools and techniques.

**UNIT 3:a.Business Plan** – importance, Content, Preparing a business plan. Business Communication – importance, Oral and written communication- improvement exercises.

**b. Books of accounts** – Importance of accounting assessment, Different books, Accounting Stationery, Operating mechanism. Financial Statements - Importance and interpret action, Profit and loss account, Balance Sheet, Cash – flow and fund flow.

**UNIT 4: a. Marketing Management-** Marketing for small business, Sales promotion – Strategies, tools and techniques, pricing policy.

**b. Export marketing** – Understanding international business environment, Do's and don'ts for exports.

**c. Legal implication** – Income tax, Sales, excise, Labour laws, factory act, etc.

**d. Supporting Entrepreneurship:** IDBI, KSFC, KSSIDC, Small scale trades, Rozgar Yojana, Self-employment programme for woman

**DSE-IX: FOOD PROCESSING AND PRESERVATION**

**2+1+1=4credits/week**

**2+2+2=6hrs/week**

**UNIT 1: Importance of food processing and preservation**

- a) Types and its uses of processing
- b) Causes of food spoilage, principles of preservation
- c). Preprocessing techniques involving physical and chemical changes in foods

**UNIT 2: General characteristic of microorganisms and their importance in foods**

- a) Factors affecting their growth and destruction

and b) Food spoilage and quality deterioration contamination sources and types. Cereal products, sugar and sugar products, vegetables and fruits, meat and meat products, fish and other sea foods, canned foods.

**UNIT 3: Methods of food preservation**

- a) Traditional and modern methods.
- b) Different storage methods.
  - Food preservation by heat – pasteurization and canning.
  - Food preservation by using low temperature – freezing and refrigeration.
  - Preservation by drying – sun drying.
  - Preservation using chemical preservatives, Radiation.
  - Preservation by other methods – addition of acid, sugar, salt, oil and spices.
- c) Food additives and fermentation.

**UNIT 4: A. Principles of food packaging**

- a) Food packaging materials and forms, Importance and safety of food packaging
- b) Food and nutritional labeling – information available on labels

**B. Food adulteration**

- a) Classification and detection methods of Food Adulterants
- b) Food Laws and Standards, Control of Food Quality, Evaluation of Food safety

**FOOD PROCESSING AND PRESERVATION – PRACTICALS 2hrs/week**

1. **Manipulative techniques of food processing** – methods of cooking, germination, fermentation and malting.
2. **Microscopic observation of micro organism** –
  - a) Preparation of bacterial smear and simple staining techniques
  - b) Observation of yeast and molds
3. **Preparation of jam and jelly**, fruit concentrate, chutneys, pickles, ketchup, dehydrated products (including spice powder), along with demonstration on packaging (standards to be emphasized)
4. **Identification of adulterants in common foods**
  - Visit to food industry
  - Collection of information from media

<b>DSC-X:</b>	<b>PROJECT/PLACEMENT/INTERNSHIP</b>	
2+1+1=4credits/week		<b>2+2+2=6hrs/week</b>
<b>DSE-XI:</b>	<b>COMMUNITY</b>	<b>NUTRITION</b>
1+1+1=3credits/week		<b>1+2+2=5hrs/week</b>

**UNIT 1: Community and its Organization**

Concept of community, types of community, factors affecting health of the community- environmental, social, cultural, dietary, organizational, economic, political, vulnerable groups/ needs of special populations

**UNIT 2: A. Public Health, Demography and Epidemiology**

Demography and its applications, Epidemiology – study of the epidemiologic approach – time distribution, place, person, determinants of disease,

preventive and social means, community health through life span, vital statistics and their significance

**B. Epidemiological methods**

Descriptive, analytical, experimental, serological, clinical

**UNIT 3: Communicable and Infectious disease control**

Nature of communicable and infectious diseases, infection, contamination, disinfections, decontamination, transmission – direct and indirect, vector borne disease, epidemiology of infection, infecting organisms and causative agents.

**UNIT 4: A. Community water and waste management**

Importance of water to the community, etiology and effects of toxic agents, water borne infectious agents, sources of water, safe drinking water/potability and tests for potability. Community wastes and waste disposal-sewage disposal and treatment, solid waste and disposal

**B. Community Food Protection**

Epidemiology of food borne diseases, modes of transmission, control measures and prevention, food protection and safety, vector control and rodent control

**COMMUNITY NUTRITION-PRACTICALS**

**2hrs/week**

**1. Meaning of scientific research and methods**

Formulation of project design

**2. Types of project design**

Exploratory, descriptive, experimental, cross-sectional or longitudinal

**3. Methods**

Survey, case study, anthropological, or experimental

**4. Tools and Techniques**

Observation, interviewing, questionnaire schedules or rating scales

**5. Tabulation and Interpretation**

Elementary statistical procedures, tabular and graphic representation of data and its interpretation.

**DSE-XII: DIETETICS**

**1+1+1=3credits/week**

**1+2+2=5hrs/week**

**UNIT 1:A. Fundamentals of diet therapy** – Definition of normal and therapeutic diets.

Routine hospital diets – fluid diets, soft diets, and regular hospital diets. Special feeding methods-oral feeding, enteral feeding, parental feeding techniques

**B Diet in the diseases of the gastro intestinal tract** – etiology, symptoms, and diagnostic tests. Treatment and dietary modification: Gastritis, peptic ulcer, Diarrhea and constipation, Celiac disease, mal absorption syndrome, Liver diseases – Hepatitis, Cirrhosis, Hepatic coma. Role of alcohol in Liver disease – Cholecystitis and cholelithiasis, Food intoxication and infection (in brief)

**UNIT 2: Diet in metabolic disorders-**

- a. Diabetes mellitus – types, symptoms, predisposing factors, diagnostic test, metabolism in diabetes, dietary treatment and meal management, hypoglycemic agents – insulin and its types. Complications.
- b. Hypo and hyper thyroidism-causes, symptoms and dietary management.
- c. Diet in fevers and infection, Dengue ,H1N1,Cancer,AIDS
- d. Diet in burns and surgical conditions.
- e.

**UNIT 3: Diet in kidney diseases – Basic renal function, etiology, symptoms, diagnostic tests, and dietary treatment of:**

- a. Glomerulo-nephritis, Nephrosis – Acute and chronic conditions.
- b. Renal failure. Dialysis.
- c. Renal calculi – causes, symptoms, diet management. Acid and alkali producing foods and neutral foods.

**UNIT 4: Diseases of the cardio-vascular system – clinical findings related to nutrition, symptoms, etiology, and diet management during:**

- a. Hyperlipidemia, Atherosclerosis and ischemia-etiology and dietary management
- b. Hypertension – etiology, symptoms and dietary management, Sodium restricted diet, levels of Sodium restriction, and sources of sodium and dangers of sodium restriction.

**DIETETICS-PRACTICALS**

**2hrs/week**

**1. Planning and preparation of special diets:**

- a. Bland diet for peptic ulcer
- b. High and low calorie diets.

**2. Case study and diet history of diseases.**

**3. Planning and preparation of diets for:**

- a. Viral hepatitis and cirrhosis of the liver.
- b. Diabetes mellitus
- c. Cardio-vascular diseases
- e. Diet for fevers/burns/surgical condition

**SEC-III: NUTRITION AND FITNESS**

**1+1+0=2credits/week**

**1+2+0=3hrs/week**

**UNIT 1: Understanding Fitness**

- Definition of fitness, health and related terms
- Assessment of fitness
- Approaches for keeping fit

**UNIT 2: Importance of nutrition**

- Role of nutrition in fitness
- Nutritional guidelines for health and fitness
- Nutritional supplements

### **UNIT 3: Importance of Physical activity**

- Importance and benefits of physical activity
- Physical Activity – frequency, intensity, time and type with examples
- Physical Activity Guidelines and physical activity pyramid

### **UNIT 4: Weight Management**

- Assessment, etiology, health complications of overweight and obesity
- Diet and exercise for weight management
- Fad diets
- Principles of planning weight reducing diets

## **SEC-IV: CONSUMER EDUCATION**

**1+1+0=2credits/week**

**1+2+0=3hrs/week**

### **UNIT 1: A. Consumption Economics**

Meaning and definitions, Family as a decision making unit of household, consumer- definition, Consumer-definition, consumerism, rights and responsibilities of consumers-rights to safety to choose, to be heard, to be informed, to redress and to healthy environment

#### **B. Market**

- Definition
- Types of markets-segmentation and characteristics
- Functions
- Channels of distribution

### **UNIT 2: A. Business Cycles**

- Monitory theories of business cycles
- Non-monetary theories of business cycle
- Implications for consumption

#### **B. Consumer and the Law**

Types-basic, social, statutory and their implications

### **UNIT 3: A. Consumer in the Market**

Consumer buying habits: convenience goods, especially goods

Buying motives: Primary, selective, rational, emotional and patronage

Consumer product and promotion practices

- Types of products
- Advertisement, sales promotion, packaging
- Public utilities-names and important types, common problems and solutions

#### **B. Consumer Buying Problems**

Adulteration, faulty weights and measures, other malpractices in market, pricing,

Legal- guarantee and warrantee contracts, instalment buying

### **UNIT 4:A. Consumer Decision making**

Good buymanship

Factors affecting consumer decisions

#### **B. Consumer protection services**

Organizations

Legislation-important laws for consumer protection  
Consumer representation

**UNIVERSITY OF MYSORE**  
**Choice Based Credit System Syllabus of Bachelor's Degree Programme in**  
**Human Development**

Sem	Sl. No.	Code No.	Type of the Course	Title of the Course	Credit Pattern in L:T:P	Credit Value	Hours/Week L:T:P	Total Hours
I	17.	HD	DSC-2A	Life Span Development – I: Prenatal to Adolescence	3: 1: 2	4	3: 2: 4	9
II	18.	HD	DSC-2B	Life Span Development – II: Adulthood and Aging	3: 1: 2	4	3: 2: 4	9
III	19.	HD	DSC-2C	Early Childhood Care and Education	3: 1: 2	4	3: 2: 4	9
	20.	HD-BA	SEC-1	Communication Skills	0: 1: 1	2	0: 2: 2	4
IV	21.	HD	DSC-2D	Children with Special Needs	3: 1: 2	4	3: 2: 4	9
	22.	HD-BA	SEC-2	Computer Applications	0: 1: 1	2	0: 2: 2	4
V	23.	HD	DSE-2A -1	Community Nutrition and Extension Education	2: 1: 1	4	2: 2: 2	6
	24.	HD	DSE-2A-2	Working with Parents and Community	1: 1: 0	2	1: 2: 0	3
	25.	HD	DSE-2A-3	Family Dynamics and Welfare Programmes	1: 1: 0	2	1: 2: 0	3
	26.	HD	DSE-2A-4	Placements in Institutions and Community	0: 0: 4	4	0: 0: 8	8
	27.	HD-BA	GE-1	Child Care and Parenting	1: 1: 0	2	1: 2: 0	3
	28.	HD-BSc	SEC-1	Child Health and Nutrition	1: 1: 0	2	1: 2: 0	3
	29.	HD-BSc	SEC-2	Child Study Methods and Documentation	1: 1: 0	2	1: 2: 0	3
VI	30.	HD	DSE-2B-1	Working with Methods and Materials	1: 1: 0	2	1: 2: 0	3
	31.	HD	DSE-2B-2	Special Education	1: 1: 0	2	1: 2: 0	3
	32.	HD	DSE-2B-3	Family and Child Welfare in India	1: 1: 0	2	1: 2: 0	3
	33.	HD	DSE-2B-4	Project Work	0: 0: 4	4	0: 0: 8	8
	34.	HD-BA	GE-2	Adolescence – Developments and Problems	1: 1: 0	2	1: 2: 0	3
	35.	HD-BSc	SEC-3	Organization and Services for Children and Youth	1: 1: 0	2	1: 2: 0	3
	36.	HD-BSc	SEC-4	Personal Empowerment	1: 1: 0	2	1: 2: 0	3

**I SEMESTER**

**DSC-1A: Life Span Development-I: Prenatal To Adolescence**

3+1+2=6 credits/week

3+2+4=9 hrs/week

Unit I:	a.	Human Development – Definition, needs, and Scope; Domains of Development: Periods of Life Span, Issues in human development -, Individual differences; Concept and principles of Growth and development; Theoretical perspectives and Methods of studying Human Development	6 hrs
	b.	Prenatal Development - Conception; Pregnancy–Signs, Symptoms, Complications, Discomforts; Stages of Prenatal Development; Conditions affecting Prenatal Development, Child Birth - Process and types of child birth, Birth complications	6 hrs
Unit II :	a.	Infancy and Babyhood – Definition, Significance, Developmental Tasks, and developmental milestones; Physical growth, reflexes and perceptual abilities, Child rearing practices and Immunization Schedule; importance of family relationships	6 hrs
	b.	The Early childhood Years – Definition, Developmental tasks; physical, motor, intellectual, language, moral, emotional, social developmental milestones. importance of preschool education and Significance of play for all-round development	6 hrs
Unit III	a.	The Middle Childhood Years - Definition, Developmental tasks. Highlights of Physical, Social, Emotional, Intellectual development. Significance of school and functions; Importance of extra-curricular activities, Peers - Importance and Influence, Interest development	8 hrs
	b.	Role of Parents and Disciplinary Techniques; Role of siblings, peers and others in the development; Behaviour problems	4 hrs
Unit IV	a.	Adolescence - Definition, classification, Developmental tasks; physical changes - puberty, growth spurt, primary and secondary sex characteristics; Identity – definition, body image, role confusion and ego identity; Abstract thinking and morality, personality development	8 hrs
	b.	Relationships and Problems of adolescents – relationships with Parent, sibling, peers and others; Adolescent Problems	4 hrs

**Practical**

4 hrs/week

1.	Preparation of poster/ booklet/leaflet on Human Development course
2.	Visit to Maternity hospital to observe child birth and neonatal reflexes – write a report
3.	Observation of overall developments of Infants/Pre-school children (0-6 years)
4.	Case Studies on Families with Infants and/or Pre-School children - Write case reports
5.	Collection of newspaper and magazine articles as well as internet searches on behavioural problems of school children – write a report
6.	Assess the problems of adolescents

## II SEMESTER

### DSC-1B: Life Span Development – II (Adulthood and Aging)

3+1+2=6 credits/week

3+2+4=9 hrs/week

Unit I:	Introduction to Adulthood – concept of adulthood, need of study, perspectives of adult growth and development- biological psychological, cultural perspectives, Stages of adulthood; Demography on adult population in India	6 hrs
	Aging Process – Definition of aging, Types of aging, Biological, Physiological Sociological aspects of ageing and its impact	4 hrs
Unit II:	Young Adulthood: Definition, Significance and developmental tasks, highlights of Physical, Cognitive and Psychosocial developments	6 hrs
	Roles and Responsibilities, Adjustments in Family and Career–Single life, Marriage, Parenthood and Non-parenthood, Vocational patterns and adjustment	6 hrs
Unit III:	Middle Adulthood – Definition, Developmental tasks, highlights of Physical, Cognitive and Psycho-social developments, Health issues; Midlife Crises,	6 hrs
	Roles, Responsibilities and Adjustments in Family and Career – Interpersonal relationship, Occupation and job satisfaction, Leisure time activities, Pre-retirement and preparation for retirement	6 hrs
Unit IV:	Late Adulthood – Definition, developmental tasks; physiological changes; Health status and Health care; Cognitive and emotional changes; Effect of retirement on self and family; Problems and adjustments; personality characteristics of old age.	6 hrs
	Old age and welfare programme: Services for the aged in India; Attitudes towards the aged; old age and interests of the aged; Institutionalized older; Issues – Loneliness, Coping with Loneliness, living in joint families, prolonged illness; Death – preparation and coping strategies, including death anxiety	6 hrs

**Practical**

4 hrs/week

1.	Case Study on young adults regarding Single life/Marriage/Career – Write a report
2.	Visits to Urban Family Planning Centre
3.	Collection of newspaper and magazine articles and internet searches on family crisis/ midlife crisis and write a report
4.	Case study on working middle aged men and women on preparation for retirement – write a report
5.	Assess the health problems of elderly people
6.	Visit to Home for Senior Citizens/Family courts/ De-addiction centers, and write a report

### III Semester

#### DSC-2C Early Childhood Care and Education

3+1+2=6 credits/week

3+2+4=9 hrs/week

Unit I:		Early Childhood Care and Education (ECCE) – Meaning, Importance and Need for ECCE, Objectives of ECCE. Types of ECCE programmes - Play centres, Day care, Montessori, Kindergarten, Balwadi, Anganwadi. Mobile Crèche and Play Group	6 hrs
		Historical overview of Early Childhood Care and Education – Contributions of Western and Indian Educators; Policies and Contributions of Agencies to ECCE in India	6 hrs
Unit II:		Organizational Setup and Material Management – Place/Building/Space – indoor and outdoor, amenities and facilities for indoor and outdoor, garden, play ground, storage; Equipments and Materials required for Play and Learning – Selection, Care and Use of equipments; Equipments needed for Urban and Rural preschools. Indigenous and low cost teaching materials	6 hrs
		Curriculum models and Programme Planning – Meaning of curriculum, curriculum models, Programme planning – Principles, Types and Factors influencing Programme planning, Programme evaluation	6 hrs
Unit III:	a.	Activities for Young children in ECCE – Age/Developmentally appropriate activities, Art and creative activities, Music and Rhythmic Activities, Mathematic, Language and Communication activities; Nature and Science Activities, 3 Rs – Reading readiness, writing readiness and readiness for arithmetic; Literature for Children; Indoor and outdoor Play activities – Role of teacher in planning and implementing the activities	8 hrs
		Parent Education and Involvement – Needs and Importance, Methods, Planning, Implementing and Evaluation of parent education program	4 hrs
Unit IV:	a.	Personnel Management – Personnel required in ECCE centre – Selection and recruitment, qualities, roles, duties and responsibilities; Supervision and monitoring , Evaluation of personnel - Cooperation and Coordination of personnel	6 hrs
	b.	Documentation and Financial Management – Importance and Principles of Record keeping, Types of records; Financial allocations and budgetary considerations, budget making and Resource generation avenues	6 hrs

#### PRACTICAL

4 hrs/week

1.	Visit to Nursery Schools, Day Care, Crèches, Anganwadi for Observation of Preschool programme and writing report
2.	Collection of newspaper and magazine articles as well as internet searches on play equipments, Address of production units and suppliers – Prepare a file

3.	Develop low cost and indigenous play materials
4.	Prepare a Scrap Book/picture book/ resource book for toddlers
5.	Plan a daily schedule on any theme and prepare the teaching aids for Pre School
6.	Prepare a file of activities related to Nature and Science, Maths and language, Games for cognitive development

#### IV Semester

#### DSC-2D : Children with Special Needs

3+1+2=6 credits/week

3+2+4=9 hrs/week

Unit I:	Definition, Concept and classification of Children with special needs. Relationship Between Delayed development and Disability, Factors influencing disability – Genetic and Environment; Incidence and Prevalence in India. Rights of Disabled Children.	4 hrs
	Need for Prevention, Intervention, Education and Rehabilitation of Disability. Early Detection, Screening, Identification and Assessment in the Community. Understanding the families with a Special Child.	4 hrs
Unit II:	Mentally Challenged and Gifted Children: Definition, Classification and Terms, Causes and Prevention, Characteristics of Children with Mental Retardation and Gifted; Role of family and community in dealing with mentally challenged and gifted children	8 hrs
	Children with Sensory Impairment: Visually and Auditory challenged – Definition, Classification, Characteristics, Causes, Prevalence, Techniques of identification and assessment; Role of family and community in dealing children with sensory impairment	8 hrs
Unit III:	Children with Learning Difficulties and Disability: Definition, Difference between difficulty and disability, Problems of labelling, Criteria for Identification and Diagnosis, Characteristics, Causes and Correlates of learning disability. Role of family and Parents in dealing with children with learning difficulties	8 hrs
	Children with Cerebral Palsy and Orthopedically Disabled: Definition, Characteristics, Classification and Prevalence, Causes and Associated conditions, Prevention and Treatment Approaches; Role of family and community in dealing children with Cerebral Palsy and Orthopedically Disabled	8 hrs
Unit IV:	Children With Communication Disorders: Definition, Importance of Speech and language, Classification, Characteristics, Causes; Role of family and community services in treatment and management	4 hrs
	Children with Behaviour Disorders: Definition, Characteristics, Classification, Different Behavioural Problems, Causes and correlating factors; Role of Family in Treatment and Therapy.	4 hrs



**PRACTICAL**

4 hrs/week

1.	Visit to Institutions of Challenged Children and observe the ongoing rehabilitation services and treatment – Writing Report
2.	Case Studies on different types of Challenged Children.
3.	Prepare case study file on different types of Challenged Children.
4.	Collection of newspaper and magazine articles as well as internet searches on challenged children – Prepare a file
5.	Prepare a play/teaching material for challenged children
6.	Plan and conduct a community based educational programme on Rights of Disabled Children

**V Semester****DSE-2D: Community Nutrition and Extension Education**

2+1+1=4 credits/week

2+2+2=6 hrs/week

Unit I:		Community Nutrition - Concept, scope and principles; Food availability and factors affecting food availability and its consumption; Nutrition and Human Development – Physical stature, Psychological status, malnutrition, morbidity and mortality	6 hrs
		Extension Education: Concept, scope and principles; Extension Models, Needs, Importance and Role of extension education in community development;	6 hrs
Unit II:		Nutritional Status and Problems: Importance, Methods of assessment, and Factors impacting/contributing for nutritional status of the community; Common nutritional problems – PEM, Micro-nutrient deficiencies, Fluorosis - causes, incidence, signs and symptoms and treatment.	8 hrs
		Hazards to Community Health and Nutritional status – Adulteration and Pesticide residues in foods, Pollution of water, Industrial effluent sewage etc.	4 hrs
Unit III:	a.	Extension Education Process: Role of the Educator, dictators to facilitators, Role of the people/Participants passive, complacent, active participants in community development; Communication Process: Definition, meaning, scope and functions of communication; communication channels and process; communication approaches – Individual, group and mass approaches; Role of extension education in community development	8 hrs
		Audio Visual Aids and Methods in extension education: Meaning, Concept, advantages and Types; importance of choice of audio visual aid in extension education; other methods of teaching the extension education – demonstration, exhibitions, fieldtrips, camps, meetings, etc	4 hrs
Unit IV:	a.	Nutritional Policies, Schemes and Programmes in India – National Nutrition Policy 1993, ICDS, SNP, ANP, BNP, Mid-day meal, Prophylaxis programme, IDD Control programme	6 hrs

	b.	Contributions of National and International agencies in Community Nutrition and Extension education – FAO, WHO, UNICEF, ICMR, NIN, CFTRI, CARE, AID, CSIR, etc.	6 hrs
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**PRACTICAL**

2 hrs/week

1.	Collection of newspaper and magazine articles as well as internet searches on nutritional status of infants and children – Report writing
2.	Prepare a questionnaire on diet survey and clinical signs for assessment of nutritional status
3.	Plan and prepare low cost recipes for improving nutritional status of infants and toddlers
4.	Prepare the audio visual aids on combating malnutrition
5.	Visit to NGOs and Government agencies at Local/Regional areas to Observe ongoing community development programme
6.	Plan and execute an extension education programme for women in rural/slum areas

**DSE-2E: Working with Parents and Community**

1+1+0=2 credits/week

1+2+0=3 hrs/week

Unit I:		Parent education and Involvement: Definition and concepts of parent education and parental involvement; needs, importance and different kinds of parent education programmes, constraints in parents' involvement and factors influencing the parent education programme.	6 hrs
		Parenthood and Parenting: meaning and concepts, significance of parenthood, roles and responsibilities of parents; parenting – meaning, types of parenting, ways and means for effective parenting, child rearing practices,, issues emerging from the complexities of modern life. parenting	6hrs
Unit II		Ways and Means of Parents Contact : Providing support for effective parenting through guidance and partnership with parents for overall child development. Importance and Conducting of : parent teacher conferences, parents meetings, newsletters and resource centres for parents	8 hrs
		Planning, Implementing and Evaluation of Parent Education programmes: Ways and methods of planning programmes, and understanding the processes involved in implementing programmes. Criteria for evaluation of parents programmes and parent involvement. General guidelines and ethical issues in working with parents.	8hrs
Unit III:	a.	Parenthood : Its importance in Child rearing practices : Importance of parenthood and understanding parents as people. Understanding parental concerns in relation to – Child rearing practices, Needs of parents, issues emerging from the complexities of modern life.	4hrs

		Community Education – meaning and concept , community education with reference to types of community ( rural, tribal, urban slums etc), Characteristics and needs of community, Different community agencies and services – their role in providing supportive services to parents , Child guidance clinics, day care centers, medical and referral services, community development centers.	8 hrs
Unit IV:		Communication Strategies: Importance of communication, factors determining the selection of appropriate methods and techniques of communications, Different approaches for communication- individual, group and mass media; Preparing, using and evaluating the techniques and media – pictorial aids , slides movie video films, posters, pamphlets, puppets, radio talks etc	8hrs

#### DSE-2B Family Dynamics and Welfare Programmes

1+1+0=2 credits/week

1+2+0=3 hrs /week

Unit I:	a.	Family Life Education: Concept, need and components of family life education, Stages of Family Life Cycle	6 hrs
	b.	Family: Definition, types, characteristics of family, Family as an Institution and Functions of family,	6 hrs
Unit II:	a.	Marriage: Definition and Universality of Marriage, purpose, Significance and Functions of Marriage, Forms of marriage, Marriages process.	4 hrs
	b.	Marital adjustment: Definition and concept, Facilitating and debilitating factors; Interpersonal relationship and Problems; impact of marital problems on family members.	8 hrs
Unit III:	a.	Family Disorganization: Extramarital relation, Desertion, Sexual infidelity, Separation – informal and legal, Divorce and Remarriage	6 hrs
	b.	Family Crisis – Family violence, Battered women, Drug addiction (Substance abuse) Alcoholic abuse, Sexual abuse, Child abuse, Dowry, Gender discrimination. Effects of Family Crisis on family members.	6 hrs

Unit IV:		The concept of Women, Child and Family Welfare - Objectives and Needs of welfare services, concept of various programmes for women, Child and family welfare	4 h r s
		Agencies Working for the Welfare of Women, Children and Families at various levels – Local, National and International UNICEF, CARE, WHO, FAO, DANIDA, IAPE, CSWB and SSWB, NIPCCD, ICCW, ICDS, DWCRA, FPAI, NCERT.	8 h r s

### DSE 2A-4 Placements in Institutions and Community

0+0+4=4 Credits /week

0+0+8hrs/week

Unit I		Placement agencies : Preschools, day care centers, ICDS centers classes I and II of primary schools, balwadis and crèches.	8 h r s
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### HD BA GE -1 Child care and Parenting

1+1+0=2 Credits /week

1+2+0=3hrs/week

Unit I:		Early childhood Care : Importance of early years, Infants: feeding practices, ORS, Toilet training, hygienic practices, common health and nutritional problems	8 h r s
Unit II:		Common ailments and behaviour problems and solutions, Sleeping , eating, bed wetting, emotional disturbances like stubbornness, temper tantrum, aggressiveness, stuttering and speech difficulties, phobias, withdrawal behaviour , siblings rivalry, and thumb sucking, common health problems	1 4 h r s
Unit III:		School age children: Problems, school dropouts, isolation in school, left handedness, negative attitude towards, curriculum.	6 h r s

		Sex-education and importance , Child abuse, Juvenile delinquency-definition, causes, organizations, available for rehabilitation.	8 h r s
Unit IV:		Parenthood and Parenting: meaning and concepts, significance of parenthood, roles and responsibilities of parents; parenting – meaning, types of parenting, ways and means for effective parenting, child rearing practices,, issues emerging from the complexities of modern life. Parenting	4 h r s
		Ways and Means of Parents Contact: Providing support for effective parenting through guidance and partnership with parents for overall child development. Importance and Conducting of : parent teacher conferences, parents meetings, newsletters and resource centres for parents	8 h r s

### HD-BSc SEC-1 Child Health and Nutrition

1+1+0=2 Credits/week

1+2+0=3hrs/week

Unit I:		Health: Definition, importance, Prenatal period: Health aspects of prenatal period, Hazards and care to be taken, Nutrition during prenatal period, daily requirements of nutrients ,immunization( TT injections), medical care to be taken, government facilities available .Conditions affecting prenatal development	8 h r s
Unit II:		Demographic features of child population, issues related to child population, girl child- issues relating to gender discrimination, female feticide.	8 h r s
Unit III:		Lactation period Health and Nutrition during lactation period, Care of mother and child after birth.	4 h r s
		Nutrition during infancy: Infant physiology relevant to feeding and care. Breast feeding- colostrums, its composition and importance in feeding. Initiation of breast feeding and duration of breast feeding. Advantages of exclusive breast feeding. Nutritional and other advantages of breast feeding. Introduction of complementary foods, initiation and management of weaning, breast feeding etc. Bottle feeding – circumstances under which bottle feeding is to be given. Care and sterilization of bottles. Preparation of formula. Mixed feeding - breast feeding and artificial feeding. Teething and management of problems.	1 0 H r s

Unit IV:	Immunisation schedule for infants and children. Nutritional needs of toddlers, preschool, school going children and adolescents – Dietary management. Management of preterm and low birth weight children.	8 h r s
	Dietary management of children during diarrhoea and fever: Use of ORT and prevention of dehydration, home based fluids. Dietary management of children with inborn errors of metabolism: PKU, Glycogen storage disease, Wilson's disease, Malabsorption (Lactose Intolerance, Celiac disease), Food Allergies.	1 0 h r s

### HD-BSc SEC-2 Child Study Methods and Documentation

1+1+0=2 Credits/week

1+2+0=3hrs/week

Unit I:	Child study methods : Meaning, importance. Methods of studying children: Survey, Systematic observation, Self-reports, Interviews and Questionnaires, Psycho physiological methods, clinical or case study method.	6 h r s
Unit II:	Methods of data collection Different types of research and their application, Quantitative and qualitative research, Concluding enquiries to collect primary data, Developing Interview schedule, questionnaire, attitude scale, check list etc. Participatory research Classical methodology – participatory approach Distinctions between Academic research, policy/ evaluation research and participatory research, steps in participatory research, the participants, Development of knowledge	1 0 h r s
Unit III:	Sample surveys: Choice of sample- simple random sample, systematic sample, Sources of bias and methods of reducing. Classification and organization of data : Classification by categories and measurement, Tabulation scheme – preparation of tabular forms, Editing and coding the data.	1 2 H r s
	Representation of data Diagrammatic and graphic presentation, Differences between diagrams and graphs, Types of diagrams – techniques of construction, Types of graphs - techniques of construction.	1 2 H r s
Unit IV:	Reporting : Techniques of writing reports, Methods of follow up and feedback. Documentation : Need for documentation in development projects, Techniques of documentation	8 h r s 8

### HD DSE-1B-1 Working with Methods and Materials

1+1+0=2 Credits/week  
1+2+0=3hrs/week

Unit I:	<p>Infancy and Toddlerhood: Characteristics of human childhood, development through interaction of maturation and stimulation from environment, exploration. Importance and ways of meeting child's psychological needs to promote feelings of security, trust and acceptance.</p> <p>Activities according to developments for various age groups.</p> <p>0 – 6 months</p> <p>Activities for stimulation and sensory motor experiences with emphasis on seeing, hearing, touching, feeling sensation and movements</p> <p>7-12 months</p> <p>Integration of experiences involving more than one sense to deepen sensory- motor experiences. Promote manipulation, concept formation, communication and perceptual discrimination.</p> <p>13 – 24months</p> <p>Promotion of co-ordination and control of body movements, gross and fine motor skills. Strengthening concept formation, imagination and communication through language. Promotion of problem solving, environment to explore and satisfy curiosity and develop confidence.</p> <p>25 – 36 months</p> <p>Improvement in body movement and communication skills, social skills and concept formation.</p>	5 h r s
Unit II:	<p>Creativity</p> <p>Concept of creativity and highlights of the role of creative expressions in overall development of children.</p> <p>Creative expressions, Meaning and definition of creativity expressions.</p> <p>Role of teacher in planning and fostering creative expressions.</p> <p>Creative expressions through a variety of media i.e. painting, printings, modeling, cutting, pasting, blocks puppetry, music movement, drama and language.</p> <p>Art activities</p> <p>Painting and graphics: Painting with brush, drawing with crayons, chalk, rangoli on floor, finger painting. Values, materials required, use of substitutes from indigenous materials. Teacher's role in conducting activities. Stages in child art. Tearing, cutting, pasting and collage, mural. Modeling ( clay, dough, plasticine, thick paper folding, stocking paper on hollow objects ), Printing ( block, vegetable, string, leaf stencils, spray, crumpled paper, different textured surfaces.</p>	1 2 h r s
Unit III:	<p>Other materials – Sand, Water,</p> <p>Music and Rhythm</p> <p>Values, materials required, use of substitutes from indigenous materials. Teacher's role in conducting activities.</p>	6 h r s

		<p>Puppetry and Creative drama</p> <p>Puppetry – Characteristics of puppetry as a medium, values of puppetry, Kinds of puppets –finger, glove, stick and string puppets, Basic staging techniques, use of lights and simple sound effects in puppetry.</p> <p>Creative drama – Meaning and values, Techniques involved in creative drama eg. Rhythmic movements, pantomime, characterization, improvisation story building. Process of scripting for puppet plays and creative drama.</p>	8 h r s
Unit IV:		<p>Communication – Language , Arts</p> <p>Importance of communication, Promotion of language skills (listening, speaking, reading and writing, sound games, talking, picture books, simple instructions, singing , finger plays and experiences, conservation in group, Reading and storytelling, narration of stories, events in proper sequence, Describing observations, Poems, riddles, opportunities for interaction with peer group.</p>	4 h r s
		<p>Literature for children</p> <p>Understanding need for literature for children. Types of literature, appropriateness and criteria for selection.</p> <p>Toddlers: pictures books</p> <p>Books for preschoolers: picture books, story books, information and concept books, number and alphabet books, poems.</p> <p>Books for 6- 8 years: story books- fables, folks tales, fairy tales and modern fantasy. Information and concept books. Physical characteristics of good books.</p> <p>Techniques of storytelling, Dramatisation, sand trays and slides. Criteria for selection poems</p>	8 h r s

**HD DSE-1B-1 Special Education**

1+1+0=2 Credits/week

1+2+0=3hrs/week

Unit I:		<p>Introduction : Need for special education with special needs, Integrated education – Its meaning and significance for child development.</p> <p>Convergence of services of specialists. Education policy, schemes and services for special and integrated education. Legislation and implementation</p>	6 h r s
Unit II:		<p>General Principles and Methods</p> <p>Identification of children for special education services, Individualised education programme approach , Preparation of non-disabled children and adults for main streaming, Role of technology in special education. Methods in home , centre and community- based intervention. Gender equity in education, Adaptation in teaching and facilities.</p>	1 0 h r s

Unit III:	Early Childhood Intervention and Education : Significance of early childhood intervention ( birth to 8 years), Methods of early stimulation – at home, at the centre and in the community, Classification to facilitate appropriate intervention. Assessment procedures for diagnosis-familiarity with observation checklists and standardized scales. Involving and empowering family in care, stimulation and education. Experiences in normalization – role of community. Counseling and therapy for the child and the family. Referral services.	1 0 H r s
	Education of children with different degrees of disability : Use of IEP to impact instruction. Methods of education at primary and secondary levels – special and integrated education, Institution – based and community – based education, Identification of training for pre-vocational skills, Vocational avenues and preparation for vocations, Guiding and strengthening family resources, Methods of evaluating children in educational setting.	1 4 H r s
Unit IV:	Children with Behaviour Difficulties and Disorders : Organising classroom arrangements for children with temporary behaviour problems, Behaviour modification techniques, Educational provisions for children with ADHD, Autism and other severe disorder, Management techniques for children with high anxiety and maladjusted behaviours, Counselling and therapy for the child and the family, Methods of evaluating children’s progress, Referral services.	8 8 h r s

#### DSE-2A-3 Family and Child Welfare in India

1+1+0=2 credits/week  
1+2+0=3 hrs /week

Unit I:	Family in India : Concept of Family, Institution of Marriage and Family, Family changes and its implications, Problems and Needs of families in specific situations – Families affected by natural calamities, Prolonged illness in family members, extreme poverty conditions,	12 hr s
Unit II:	Situation Analysis of Children and Adolescents : Demographic profile and issues related to health and nutrition; socio-educational status; Problems of school dropouts, high risk adolescents; Girl child – issues related to gender discrimination	12 hrs
Unit III:	Situation Analysis of Women : Overview of status of women in India, issues related to health and nutrition, issues related to social problems namely dowry, domestic violence, divorced and deserted women, widowhood and unwed mothers, etc. , ,	12 hrs
Unit IV:	Situation Analysis of Aged : Specific problems of the aged or ageing, health and nutritional care of aged, problems of elderly living alone	12 hrs

#### DSE-2A-4 Project Work

0+0+4=4credits/week  
0+0+8=8 hrs /week

Unit	Project work related to the aspects of Human Development	8hrs/week
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**HD-BA GE-2 Adolescence – Developments and Problems**

1+1+0=2 credits/week

1+2+0=3 hrs /week

Unit I:	Definition , Different views regarding the period, Physical development- Puberty, growth spurt, primary and secondary sex characteristics, early and late maturing adolescents	12 hrs
Unit II:	Identity – definition, body image, positive and negative out comes ( role confusion, ego- identity), Choosing a career – stages, factors affecting selection , Peers and Heterosexual relationship – Importance , age of occurrence, patterns of friendship	12 hrs
Unit III:	Relationships and Problems of adolescents – relationships with Parent, sibling, peers and others, Heightened emotionality – meaning, causes, expression, characteristics of emotional maturity, conflict with family. Problems – Drug and alcohol abuse, psychological breakdown, STD and AIDS	12 hrs
Unit IV:	Guidance and Counselling : concept, need, scope, and functions, Essentials for effective counselling, counselling process and special areas of counselling. Role of teachers and parents in counselling. Guidance and counselling elementary, high school and college students.	12 hrs

**HD BSc SEC-3**

**Organisation and Services for Children and Youth**

1+1+0=2 credits/week

1+2+0=3 hrs /week

Unit I:	Conceptual Understanding of the term “ Children in difficult circumstances” : Various categories of children – orphan, destitute, working child(child labour), street children, vagrant, juvenile delinquents, child prostitutes, children of prostitutes, children of AIDS parents, children of parents undergoing long-term imprisonment, child abuse, children of working mothers. Causes and magnitude of the problems of each category of children under difficult circumstances. Needs and specific problems of children in different circumstances Child Welfare Services: Classification of services, Institutional/ Non-institutional, Supportive, supplementary, substitute family services, Curative, preventive and developmental services.	12 hrs
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Unit II:	<p>Definitions of Welfare and Development.</p> <p>Services for certain groups – Services for orphan, destitute, neglected, vagrant, delinquent children. Institutional services, SOS children’s village, Orphanage, Foster care, adoption.</p> <p>Services for street and working children : Interventions strategies different models, Shelter/ night shelter, outreach programme, group homes.</p> <p>Services for children of prostitutes, abused children.</p> <p>Services for children of working mothers : day care, family day care, factory crèches</p>	12 hrs
Unit III:	<p>Developmental services : ICDS, Non formal education (NFE) for school drop-outs, Sponsorship programmes for poor children, Holiday homes for children, programmes for adolescent girls.</p> <p>Agencies working for children: Indian Council for Child Welfare, Association for the Pre-school child, NCERT, national Institute for Public Co-operation and Child Development (NIPCCD), CRY, UNICEF, SOS CHILDREN’S Village of India, Guild of Service, Child Guidance Clinics, Juvenile Service Bureau.</p> <p>Overview of services for children : Five year plan, allocation of funds for child development/welfare programmes – coverage, gaps.</p>	12 hrs
Unit IV:	<p>Youth groups : Urban youth, rural youth, tribal youth, employed/ unemployed youth, Youth in poverty groups, student/non-student youth.</p> <p>Support services for youth development : counseling, employment bureaus/career guidance, sports and recreational activities, Life styles education for youth, NCC,NSS and youth camps, AIDS/MIV, STD awareness programmes.</p> <p>Agencies working for youth : Ministry of Human Resource Development, Department of sports and Youth Affairs, Nehru Yuvak Kendra, YMCA, YWCA, Ramkrishna Mission, Vishwa YUvak Kendra, YUVA, B.mbay.</p> <p>Overviws of Youth Services.</p>	12 hrs

### HD-BSc Sec-4 Personal Empowerment

1+1+0=2 credits/week

1+2+0=3 hrs /week

Unit I:	<p>Personal Growth and Personality Development :</p> <p>The Challenge: Understanding and managing oneself, being aware of one’s strengths and weakness.</p> <p>Personality Development: Factors and influences, emotional and motivational aspects, assertion vs. aggression.</p> <p>Peer pressures: Issues and management, group conformity and individualism as co-existing aspects.</p> <p>Conflicts and stresses, simple coping strategies.</p> <p>Adjustment and readjustment to changing needs and conditions of contemporary society ( technical changes, social changes, changes in values).</p>	10 hrs
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Unit II:	<p>Empowerment of women:</p> <p>Women and development: The personal, familial, societal and national perspectives.</p> <p>Capacity building for women: Education, decision –making abilities and opportunities, awareness and information on legal and political issues.</p> <p>Women’s organizations and collective strength: Women’s action groups, women’s participation in development initiatives.</p> <p>Study and discussion of life histories, case studies of illustrious Indian women from different walks of life (eg. Jhansi ki Rani, Medha Patkar, Kiran Bedi, Vijayalaxmi Pandit, Sudha Chandran, Anutai Wagh, Ila Bhat, Bhanvari Devi )</p> <p>Profiles of women’s organization and collective and activist efforts to improve the quality of life or tackle issues of concern( eg. SEWA, Women’s cooperatives, WIT)</p>	12 hrs
Unit III:	<p>Some Significant Contemporary Issues of Concern:</p> <p>Gender Issues: Inequities and discriminations, biases and stereotypes, myths and facts.</p> <p>Substance abuse : Why and how to say ‘NO’</p> <p>Healthy Habits: In relation to physique, to studies, to heterosexual interests.</p> <p>AIDS: Awareness and education.</p>	10 hrs
Unit IV:	<p>Human Rights</p> <p>Definition and evolution of rights – Human rights, child rights, women’s rights, charter, convention, policy.</p> <p>Classification of human rights – moral rights, legal rights, civil rights and political rights, social, emotional and cultural rights, environmental and developmental rights.</p> <p>Advocacy of human rights.</p> <p>Rights of women- marriage, reproductive, property, dowry, domestic violence.</p>	16hrs