# B. A. HOME SCIENCE PROGRAMME

## COURSE STRUCTURE FOR C.B.C.S. (REVISED)

IMPLIMENTED FROM JUNE-2018

## SEM-II

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**B. A. HOME SCIENCE**

**Core-111 Theory**

**Introduction to Household Equipments**

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**FOCUS:**

This Course intends to impart knowledge and understanding of construction of various household equipment, the Material used, selection, criteria, their usage, operation and maintenance as well as to make them aware of good buymanship, consumer problems, consumer rights and responsibilities and consumer Laws.

**OBJECTIVES:**

This course enables Students to-

1) Recognize base materials, finishes and insulating materials used in the construction of household equipment.

2) Understand the Principles underlying the operation, use, care and storage of household equipment.

3) Understand the criteria for the selection and buying for appropriate equipment for home and suitable material for functionality.
4) Analyze various equipments with respect to design, cost, and maintenance.
5) Understand to handle minor problem of repairs and maintenance.
6) Aware of good buymanship and the factors affecting it.
7) Understand consumer rights and responsibilities, as well as handling consumer problems with the help of consumer service and consumer law.

UNIT-1

Material used for household equipments
1) Importance of learning household equipment and new trends in it.
2) Material used for household equipments.
   a) Base materials:
      Aluminum, Iron, Steel, Copper, Brass, Glassware, Plastic & Potteries.
   b) Finishes:
      Mechanical and Applied
   c) Insulating materials:
      Mica, Fiberglass, Puff, Mineral wool, Rock wool, Plastic, Foams, Rubber etc.

UNIT-2

Household Equipments- Non –electrical
1) Classification of household equipment, Selection, Care.
   a) Food related-
      i Preparation:- Chopping board, Greater, Pillar, Copper, Beater, Chilly Cutter, Juice extractor, Hand mixer.
      ii Cooking:- Pressure Cooker, Tandoor, Idali stand, Dhokalia, Sandwich toaster, Non stick cookware (Dosatava, Frying pan), Siramic cookware, Solar cooker.
      iii Serving equipment:- Plates, Serving dishes, Bowls, Spoons, Hot cases, Casseroles, Tongs etc.
b) Cleaning related-
   Brushes, Moppers, Brooms, Scrubber

c) Laundry related-
   Bucket, Tumbler, Tub, Brush, Dhoko, Scrubber, Suction washer, Pin, Wire.

UNIT-3

Household Equipments- Electrical

1) Selection, Use, Care & Stores of various Electric household equipment used for Kitchen, Laundry & Cleaning.

   a) Kitchen:- Mixer, Grinder, Oven, Microwave, Refrigerator, Ice cream maker, Hand mixer, Roti maker, Toaster -(Pop up & Equity)
   b) Laundry:- Washing machine, Iron
   c) Cleaning:- Vacuum Cleaner

UNIT-4

Consumer Education

1) Importance & Factors affecting good buymanship such as:
   a - Size & Types of Family
   b - Income
   c - Stages of family life cycle
   d - Goals and values of family
   e - Market availabilities
   f - Knowledge and post experience
   g - Sex of buyers
   h - Place of residence
2) Consumer’s Rights and Responsibilities.
3) Consumer Protective Service
   a – Indian Standard Institution (ISI)
   b – Consumer Guidance Society
   c – Consumer Education And Research center, Ahmadabad
   d – Consumer Co-operatives
4) Importance and types of consumer protection Law.
OTHERS-

1 Assignment
2 Group discussions
3 Audio-Visual aid and Internet

REFERENCES-
3 Dr.AshaJani, Dr.NirmalNalag, GruhsajjaaurGruhvyavasta
4 Varma Pramila, good house keeping
Focus:
This builds upon the core course Applied Physics and Chemistry and provides further information regarding organic and inorganic chemistry as well as biochemistry applied to human health care.

Objectives:
To course will enable the students-
(1) To Create an awareness among the students about principles & Fundamentals of Physics & their application in day today life activities.

(2) To recognize the importance of Chemistry, Chemical reactions & their uses.

(3) To develop Knowledge in the field of pesticides, fertilizers, fuels, chemicals in Medicines & healthcare.
PHYSICS

UNIT-I

I - Mechanics :

- State of matter-General & Specific Properties of matter (Solid, Liquid & Gas)
- Machines – Types – Simple & Complex.
- Lever-Types & their Functions.
- Pulleys-Types & Uses.
- Inclined plane, screw, jack screw.
- Force-Centripetal & Centrifugal Force.
- Friction- Types, Laws, advantages & disadvantages

UNIT-II

Light :

- Introduction to light, Propagation of Light.
- Reflection & Refraction of light – laws & Index
- Lens & Mirrors- Types
- Real Image & Virtual image.
- Image formed by concave lens & Concave Mirror
- Uses of lens & Spherical mirror.

CHEMISTRY

Unit-III

Inorganic Chemistry

I - Structure of inorganic Substance :

- Explanation of element, compound & Mixture
- Structure of atom (Only Rutherford model), Atomic weight, molecule, moleular weight, Equivalent weight, Valence, symbol, Chemical Formula, equation, Physical & Chemical Change.
II- Acid & Base:

**Acid**- Definition, Strength, Properties, strong & weak acid, useful acids.

**Base**- Definition, Strength, Properties, strong & weak base, useful bases.

**PH**- Scale, explanation, measurement, importance of PH. Neutralization, Stats

III- Water


**UNIT-IV**

**Organic Chemistry**

I **Introduction to organic Chemistry**:
Sources of Organic Chemical, importance of organic compounds, classification of organic compounds with examples, homologues series, functional groups.

II **Pesticides**:

III **Chemicals in Medicines & Healthcare**:
Analgesics, Antiseptics & disinfectants, Anti biotic, sylph drugs, Drugs for common cold, influenza & other diseases, Hypnotic & Sedative drugs, Tranquillizer drugs, Hallucinogens, Laxatives, Antihelminthics.
Reference:

(2) Test Book of Organic Chemistry – P.L.Soni,
(3) Test Book of Biochemistry – west & Todd.
(4) Test-Book of Applied Chemistry-MMJ Jacob (1996)
(5) Chemical Technology – Chandrakant Mehta
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Others:

Physics

Heat:

- Effects of heat on matter- Solid, Liquid & gaseous Substances..
- Heat & temperature – measurement of temperature.
- Transfer or heat - conduction & Convection, uses of heat transfer in daily life.
- Equipment-Thermometer, Thermo flask

CHEMISTRY

I  Plastics: Definition, types, properties & Uses.

Fuels: Definition, types, characters of ideal fuel, Composition & Uses of LPG, Coal Gas, Producer Gas

II  Water Gas, Gobar Gas,
III  **Fertilizers**: Plant Nutrients, symptoms of their deficiency.
- Classification- Single, Mixed, Complete.
- Types-Nitrogen, Phosphorus, Potassium. Fertilizers.

IV  **Formula & Uses of Following Compound**: 

I  **Inorganic Chemistry**:

(1) Sodium Chloride (2) Washing Soda (3) Baking Soda
(4) Bleaching Powder (5) Alum

II  **Organic Chemistry**:

(1) Glucose (2) Vinegar (3) Ethanol alcohol.
(4) Citric acid
(5) Phenol.

* Use of Journals & Use of Assignment, Presentations & Group discussion
(EC –1) Elective-111

PRACTICAL- HANDLING OF HOUSEHOLD EQUIPMENT

Focus:

This course is basically designed of practicals based on Core-1 (111) introduction to Household Equipment and Consumer Education. It provides the basic skills of handling materials used for household equipments by applying the knowledge of principles of equipment. This course also focuses on developing skills in using, cleaning and maintaining of various electrical and non-electrical equipments.

Objective:

This course enables students to

1. Get skills in cleaning and maintaining various materials used for household equipments.
2. Develop skills in selecting, purchasing, using, maintaining and cleaning various electrical and non-electrical equipments.

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3. Develop skill to prepare food items by using various electrical and non-electrical equipments.
4. develop understanding regarding good by Man ship, buying behavior problems, consumer problems, consumer protective services, Consumer law by doing community survey and market survey.

(Total 22 Practical)

UNIT– I

(Total 04 Practical)

i) Metal cleaning (Cleaning of an Articles or surface) (03 Practical)

Aluminum, Steel, Brass, Copper, Iron, Tin, Bronze, Mina Kari, Gold, Silver, Glass, Plastic.

ii) Do a market survey and identify and list down various base material used for household equipment and writes merits and demerits. (01 Practical) OR

iii) Do a Market survey and identify finishes used in household equipments. List down and write their importance and care. (01 Practical) OR

iv) Do a Community survey and list down various household equipments used in terms of design, selection, cost, usage, care and maintenance, time and energy saving value, storage, quality and their brands or manufacturers. (01 Practical)

UNIT – II (02 Practicals)

i) Identify and make a list of Non electric House hold Equipment accordingly to various types.

ii) Understanding following commonly used non-electrical equipments in laboratory in terms of –

a) material
b) finishes
c) use
d) construction
e) principle
f) cleaning
g) care and maintenance
h) common problems and its repairs
(i) merits and demerits
(j) types (if any)


UNIT – III
(Total 10 Practical)

1. Identify and make a list of Electrical Household Equipment accordingly to various types.

2. Understanding following commonly used electrical equipments in laboratory in terms of –
   a. material
   b. finishes
   c) use
   d) construction
   e) principle
   f) cleaning
   g) care and maintenance
   h) common problems and its repairs
   i) merits and demerits
   j) types (if any)


3. Cleaning & Laundry Equipments.
   (i) Vacuum Cleaner, (ii) Washing Machine, (iii) Iron

UNIT – IV
(Total 06 Practicals)

1. Serving - Plating, Garnishing, Trays, Food Presentation - Balance, Colours, Shapes, Textures, Flavours, Portion size, Temperature etc.
2. Visit to CERC, Ahmadabad OR any Consumer organization and write the report on its functions (01 Practical)
3. Table setting-Indian and Western (02 Practical)

References:

2) Aacharya Manjari S., Gruhupakarnoni Olakh, 5th edison, Dipprakashan, Vallabhvidhyanagar 1995 (gujarati)
3) S.R. Sharma and Vishay Kaushik, Home Management and Housekeeping
4) Dr. Joshi, Market in India

Others:

1) Demonstration
2) Journals
3) Project Work
4) Group Assignment
5) Survey
Focus:

This is builds upon the core course Applied Physics and Chemistry and Provide further information regarding organic and Inorganic Chemistry as well as biochemistry applied to human health care

Objectives: To course will enable the students-

1. To Create an awareness among the students about principles & Fundamentals of Physics & their application in day today life activities.
2. To recognize the importance of Chemistry, Chemical reactions & their uses.
3. To develop Knowledge in the field of pesticides, fertilizers, fuels, chemicals in Medicines & healthcare.

(Total 28 Practical)
**Unit-I**

**PHYSICS** (Total 2 Practical)

1. To find the Focal length of centavo mirror.
2. To find the focal length of convex lens.

**CHEMISTRY** (Total 3 Practical)

3. Volumetric Analysis: (Involving one acid & one base)
4. To determine the acid value in (Ghee/Oil)
5. To determine PH of the given solution by using litmus paper & PH Paper.
   (Washing Soda, Vinegar, Lemon Juice, Milk, Tomato Juice, Distilled Water)

**UNIT-II** (Total 10 Practical)

6. Analysis of various constituents present in following vegetables & Fruits: (1) Potato, (2) Tomato, (3) Carrot, (4) Lemon,
   (5) Orange, (6) Pineapple
   2. Test of acidic/base solution.
   3. Determine PH Value
   4. Test for Starch, Carbohydrate, protein, iron, Phosphate, Calcium, Magnesium, Sodium, and Potassium.

**UNIT-III** (Total 5 Practical)

7. To Perform analysis of qualitative Compounds:
8. Positive Ions: $\text{Fe}^{2+}$, $\text{Fe}^{3+}$, $\text{Ba}^{2+}$, $\text{Ca}^{2+}$, $\text{Mg}^{2+}$, $\text{Na}^+$
   Negative Ions: $\text{Cl}^-$, $\text{CO}_3^{2-}$, $\text{SO}_4^{2-}$, $\text{NO}_3^-$

**UNIT-IV** (Total 8 Practical)

9. Organic qualitative analysis of the following Compounds:
   (i) Benzoic acid (ii) Salicylic acid (iii) Acetic Acid
   (iv) Glucose
   (v) Urea (vi) Naphthalene
10. Chemical Technology (Only Demonstration)
11. To Prepare Tooth Powder
12. To Prepare detergent Powder
Others:

(1) Group Discussion
(2) Assignment and Journal
(3) Project Work
(4) Visit and Report Writing

Reference:

(2) Test Book of Organic Chemistry – P.L.Soni,
(3) Test Book of Biochemistry – west & Todd.
(4) Test-Book of Applied Chemistry-MMJ Jacob (1996)
(5) Chemical Technology – Chandrakant Mehta
(6) rsay`xaS a Üg>h iv)anÝ–Ae. ke. kazI.
(7) rsay`xaS a Üg>h iv)anÝ–Aan>d
(8) Household Physics- Aurey Madelyn (1987) (Mac Millon Company Unit-1-IV)
B.A HOME SCIENCE
SEM- II
THEORY
ELECTIVE-112
INTRODUCTION TO HUMAN DEVELOPMENT

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Focus:
This is an attempt to guide undergraduate students in understanding of the field of human Development in a basic way.

A Conscious deviation is taken from the stage-wise approach to the life span, So as to cover the major topics and to understand various aspects and factors important for growth and development it.
Objectives:

This Course enable Student -

1) To Develop awareness of important aspect of growth and development during the whole life span
2) To become acquainted with developmental stages from prenatal period to old age
3) To sensetise the student to understand the issues faced and adjustments required at each stage across the life span.

UNIT-I

Orientation to growth and Development

1) Concept of Human development
2) Concept, General Principles and effective factors of growth and development
3) Influences of Heredity and Environment on growth and Development.

UNIT-II

Dimension of development over the Life Span

1) Different Stages of Human development
2) Various aspects of development and inter-relationship among them (In short)
   a) Physical development
   b) Motor development
   c) Social development
   d) emotional development
   e) mental development
   f) personality development
   g) Cognitive development
   h) Cultural development
3) Growth and development during prenatal period and factors affecting on it.
4) Problems and their arrival during prenatal and infancy period.
UNIT-III

Growth and Development during children

1. Growth and Development during early Children (2 to 6 Years)
   a) Development tasks, Significance of this period
   b) Orientation to preschool education and significance need and care of pre-scholars.

2. Growth and Development during middle Children (6 to 12 Years)
   a) definition
   b) Developmental tasks and significance of this period

3. Role of School, Peer group, Care Taker, Parents, Play etc. in allover development of Children

4. Problems and their arrival during prenatal and infancy period.

UNIT-IV

Growth and Development during Adolescence, Adulthood and Aging period

1) Definition and Significance of each stage
2) Developmental tasks of Adolescents, adult and old people
3) Need and care during each stage
4) Problems and coping with them during each stage.
Others:

(1) Use of Audio-Visual aid and Internet
(2) Group Discussion
(3) Assignment
(4) Project Work
(5) Visit and Report Writing

Reference:

3) Dr. K.C.Panda, Elements of child development
(Family and Community Sciences)

Home Science Undergraduate Programme for General Home Science (Composite) Curriculum as per the choice based credit system (Implement from June 2018)

B. A. HOME SCIENCE PROGRAMME

COURSE STRUCTURE FOR C.B.C.S.

SEM – III

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SEM – III  
CORE – 201Meal Management  
THEORY

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FOCUS:

This course builds upon the Fundamentals of Meal Management and provides further information regarding meal planning according to various age groups, activities, festivals etc. as well as information regarding various nutritional deficiency diseases, nutritional assessment and dietary treatment in various diseases.

Objectives:-

This course will enable the students to:

1) Understand basic concept of meal management, meal planning according various age groups, activities, festivals etc.

2) Get familiar with various nutritional deficiency diseases and dietary treatment it them.

3) Get familiar with meaning and various methods of nutritional Assessment.
Unit – 1

Use of Balanced diet in Meal Planning

1) Definition, meaning and importance of meal planning, use of basic food groups in meal planning.

2) Various factors affecting meal planning, nutritional requirement factors like socio-cultural, religious, geographic, economics. Availability of time, material and resources physical & mental activities, special nutritional conditions / problems.

Unit – II

Meal Planning for Different Age Groups

(Requirements, Nutritional Problems, food selection according to different activities & socio economics levels)

1) Infant feeding (Birth to one year)
   a) Breast feeding
   b) Bottle feeding
   c) Weaning food (Supplementary feeding.
   d) Nutrition for Infant (1 year old children)

2) Meal Planning for Children
   a) Preschoolers. (2 to 5 years)
   b) School children (6 to 12 years)
   c) School lunch and packed lunch for children.

Unit – III

Meal Planning for some special Physiological needs and Activities

1) Meal Planning for adolescent boy & girl.
2) Meal Planning for Adult men and women according to their work. (Heavy, Moderate and sedentary works)
3) Meal planning during pregnancy (According to complication occurring in pregnancy)

4) Meal planning during lactation

Unit – V

Meal Planning for old age, menopause, athletes & planning Some dishes.

1) Meal planning for old age and menopause (According to complication occurs.

2) Meal planning for Athletes (According to energy expenditure)

3) Planning for some dishes like Punjabi, South, Indian, Chinese, Mexican dishes.

References:-

1) Dr. M. Swaminathan, “Human Nutrition and Diet”, The Bangalore Publisher, New Delhi.


4) Dr. Swaminathan, “Handbook of food and Nutrition”, The Bangalore Publisher, New Delhi.

5) ykh. hks½û{e, «pwǒikÂkku»ký, ŸwrLkðŠMkxeökûtÚkrLk’koýčkkuzo, økwshkíkhkβ¿, y{ĚkðkÉ- 380 006.


SEM – III

CORE - 202

THEORY

Applied Life Science

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FOCUS :-

This build upon the core course Applied Life Science. Provide further information regarding plant morphology, physiology, microbiology, human physiology & genetics.

Objectives :-

The course will enable the students:-

1) To understand the knowledge about origin & evolution of life & genetics.
2) To understand the application of botany & horticulture in agriculture & role of micro-organism.
3) To understand the relation between biology & human welfare.
4) To understand the physiology of human body & plant physiology.
UNIT – I

(I) History of life
1) Origin & evolution of life.
   a) Physico-chemical processes of early earth leading to origin of life.
      i) Operin theory
      ii) Miller’s experiment.
   b) Requirements for maintenance of life –
      i) Light
      ii) Temperature
      iii) Water
      iv) Air
   c) Characteristics of life :-
      i) Metabolism
      ii) Growth
      iii) Reproduction
   d) Evolution :-
      i) Evidences of evolution (1) Fossils (2) Comparative Anatomy (3) Vestigial organs (4) Embryological Evidences.
      ii) Theory of evolution :- (1) Lamarck (2) Darwin.

(II) Human Genetics :-
1) Heredity – Mendle’s monohybrid experiment & their principles.
2) Inheritance & sex determination.
3) The genetic basis of human diseases – Hemophilia, Color blindness.
4) Blood group – ABO System. - Rh System
UNIT – II

I-Plant Morphology

1) General Characters of monocot (maize) & dicot (Vincarosea) plant.

2) External and internal characters of monocot seed (Maize) & dicot seed (Bean) & its germination stages.

3) Pollination –
   a) Definition, Agencies, Types.
   b) Characteristics of insect pollinated. (Hibiscus) & Wind pollinated (Maize) flowers.

4) Reproduction in plants :-
   a) Vegetative propagation in plants.
   b) Sexual reproduction in flowering plants.

II – Plant Physiology

1) Osmosis – Definition, Types & its importance.

2) Transpiration – Definition, Types, Affecting factors & its importance.

UNIT – III

(I) Microbiology

1) General characteristics & classification of microorganisms – Bacteria & Virus.

2) Advantages & disadvantages of bacteria.

3) Entrance of bacteria in human body.

4) Common parasitic infection – malaria parasite life cycle.

(II) Biology & Human Welfare

Economically useful plants

a) Food :-
   i) Cereal – Wheat, rice, maize
   ii) Pulses – Tuwer, Mung.
iii) Vegetables –

1) Root – Carrot, Radish
2) Stem – Potato, Amorphophallus
3) Leaf – Spinach, Amaranthus

iv) Nuts – Cashewnut, Walnut

v) Fiber – Cotton, Jute.

1) Medicinal plants – Ajwain, clove, eucalyptus, penecillium, tulsi, vasaka, Zinger.

2) Useful animals – earth worm, fish, honey bee, Oyster, silk moth, Snake.

3) Life history of silk moth.

UNIT – IV

Human Physiology

1) Gastro intestinal System :-
   a) Structure & functions of various organs of the GI tract.
   b) Digestion & absorption of carbohydrate protein, Lipid.
      The role of Enzymes.

2) Respiratory System :-
   a) Structure of lungs
   b) Mechanism of respiration & its regulation.

3) Cardiovascular System :-
   a) Blood & its composition
   b) Structure & function of heart
   c) Circulation of blood

4) Excretory System :-
   a) Structure & functions of kidney
   b) Formation of urine & its filtration process

5) Nervous System :-
   a) Parts of brain & its function
   b) Reflex action

6) Sensory Organs :-
   a) Eye (b) Ear
References :-

1) Dr. Garg P. K. – Biology (SôrôkkLk)
2) Dutta A. C. – Tex book of Botany
3) Gupta P. K. – A text book of Cyfology, Genetics & Evolution
4) Jain V. K. – Fundamentals of Plant Physiology
6) Vidyarthi R.D.-A text book of Zoology
FOCUS -

This course purports to create awareness and functions of marriage and family as basic institutions. The charging trends, the dynamics of adjustment and contemporary problems and issues are to be critically analyzed for developing better understanding of needs, adjustment areas and intervention strategies.

Objectives :-

The student will

1. Acquire knowledge and insights about the dynamics of contemporary marriage and family Systems in India.

2. Become acquainted with the concept, goals and areas of adjustments in marital relationship and within the family.
3. Become aware of the Changing roles and relationships within the family.
4. Understand the dynamics of families in distress and crisis.

**Unit – I**

**Family in India**

1. Importance of Family as a social institution in India.
2. Types of family.
   a. Characteristic of Family.
   b. Merits & Demerits of Joint of family.
   c. Merits & Demerits of Extended family.
   d. Merits & Demerits of Nuclear family.

**Unit – II**

**Engagement & Wedding**

1. Mate Selection :-
   a. Characteristics of an ideal life partner.
   b. Importance of certain essential once e.g. permanence, fidelity, companionship, love happiness, ego support, approved sexual expression.
   c. Achieving emotional maturity
2. An Engagement :-
   a. It’s Importance.
   b. The courtship period.
   c. The engagement period.
   d. Sex before marriage.
   e. Factors for breaking of engagement.
   f. The problems arise due to break of engagement.
UNIT – III

Concept of Happy marriage & Adjustment in marriage life

A. Concept of marriage
   1. Meaning, definition, function of marriage
   2. Types of marriage
      a. Arrange marriage
      b. Love marriage

B. Wedding Ceremonies.
   1. Types of ceremonies observed in different communities in India.
   2. Importance of wedding ceremonies.
   3. Good & harmful ceremonies.

C. Happy marriage & adjustment in marriage life.
   1. Factors affecting happy marriage: Sacrifices, economics status, religious, sex emotion.

UNIT – IV

Social Act & family crisis

(1) Social act: -
   - Dowry prohibition act.
   - Child marriage prohibition act.
   - Female feticide act.
   - Sex Determination act.
   - Household fortune act.

(1) Family Crisis - reasons, effect on family & remedies.
   - Unmarried person.
   - Old age & their problems.
   - Illness & Death.
   - Divorce.

(2) Mechanisms for Solution of crisis.
   - Planning for the future.
   - Family counseling service.
   - Legal remedies.
OTHERS :-

1. Assignments.
2. Group Discussion.

Reference:

2. LangaAneKautumbicSambandho – Leelaben Shah.
5. LagnaKutumAneSamayojan – DheerajDhakan.
6. Bhari me ParivanVivah or NatedariShobhnaJaine.
8. VyaktiSamayojanVigyem – Dr. C. T. Bhopatkat
SEM – III  
Elective – 201  

Practical-Meal Planning and preparation

<table>
<thead>
<tr>
<th>Lectures Per Week</th>
<th>Total</th>
<th>Marks Per Paper</th>
<th>Duration of Exam</th>
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FOCUS:

This course based on core course- 201. It is designed to provide the skills in preparing various food items according meal planning of various age groups, activity, festivals etc. as well as daring nutritional deficiencies of nutrients.

Objectives :- This course will enable the students to:

- Be familiar with weights and measures of food items, raw food & cooked food.
- Develop skill in planning a menu for various age groups & activities.
- Develop skills in preparing food items according meal planning of various age groups & activities.
- Develop skills in preparing and evaluating recipes according to various festivals and regions.
- Develop skill in preparing and evaluating recipes according to nutritional deficiency disorders.

(Total 20 practicals)
Unit – I   (4 Practicals)

1. Standardization

Unit – II    (4 Practical)

1. Planning for infant including weaning foods (1 Practical)  
2. Planning for pre-School (1 to 3 years) Children (1 Practical)  
3. Planning for school children including packed lunch (3 to 5 years and 5 to 10 years) (2 Practical)

Unit – III   (8 Practical)

1. Planning for Adolescence girl and boy (2 Practical)  
2. Planning for adult man/women (any one- heavy/ moderate and sedentary work) (2 Practical)  
3. Planning for pregnant and lactating women (2 Practical)  
4. Planning for old age (1 Practical)  
5. Planning for Athlete (1 Practical)

Unit – IV   (4 Practical)

1. Planning for Punjabi dishes (1 Practical)  
2. Planning for South Indian dishes (1 Practical)  
3. Planning for Chinese dishes (1 Practical)  
4. Planning for Mexican dishes (1 Practical)  
5. Planning dishes for occasions- Birthday, Marriage (1 Practical)

References:

SEM-III
Elective – 202
Practical - Applied of Life Science

<table>
<thead>
<tr>
<th>Lectures Per Week</th>
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<th>Marks Per Paper</th>
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FOCUS:

This is build upon the CORE-202 course Applied Life Science provide to guide the undergraduate student to understanding of the field of plant physiology, morphology, human physiology, genetics & evolution.

Objectives:-

This course will enable the students to:

1. To get familiar with cell structure, concepts & their important role in life processes.
2. To understands the different parts of plants & their uses in daily life.
3. To help to learn the identification of blood group & the role of enzymes in digestion in human being.
4. To recognize different of human body systems & their functions.
Unit – I

History of Life & Human Genetics – Total – 5

(1) To study the Onion cell.
(2) Study of Potato starch grain.
(3) To study the hydrolysis of starch with Salivary enzyme ptyalin (Amylase)
(4) To study the identification of Blood group through ABO method.
(5) To study the identification of Blood group through Rh factor method.

Unit – II

Plant Morphology Total – 9

1. Study of various parts of flowering monocot (maize/wheat) plant.
2. Study of various parts of flowering dicotyledonous (Vincarosea) plant.
3. Study of external & internal characteristics of monocot (maize) seed.
4. Study of growth & development in plants through germination stages of monocot (maize)
5. Study of external & internal characteristics of dicot (Bean) seed.
6. Study of growth & development in plants through germination stages of dicot (Bean) seed.
7. Study of insect pollinated (Hibiscus) & wind pollinated (maize/wheat)
8. To Study vegetative reproduction:
   2. Fragmentations – Spirogyra (slide).
9. To study sexual reproduction on flowering plants through slides:
   1. T. S. of anther
   2. T. S. of Ovule.

Unit – III

Microbiology & Human Welfare :- Total – 4

1) To study of life history (Metamorphosis) of silk moth through preserved specimen.
2) Study the economically useful plants through (fresh/Preserved) Specimens (Based on theory).
3) To study the medicinal plants through fresh/preserved specimens (Based on theory).
4) To study the useful animals through specimens (Based on theory).

Unit – IV

Human Physiology & Plant Physiology. Total – 13

1) Study of Digestive organs of human body through Model/Chart.
2) Study of human Heart through Model/Chart.
3) Study of human Eye through Model/Chart.
4) Study of human Ear through Model/Chart.

Demonstration Practical

1) To study the process of Osmosis through Thistle funnel experiment.
2) To study the process of Osmosis through Potato Osmoscope experiment.
3) To study the process of Osmosis through Endosmosis.
4) To study the process of Osmosis through Exosmosis.
5) To study the process of Transpiration in plants through Belier experiment.
6) To study the process of Transpiration in plants through Ganong’s potometer experiment.
7) To study the process of Transpiration in plants through four leaf experiment.
8) To study the process of Transpiration in plants through Cobalt Chloride paper experiment.
9) To study the process of Transpiration showing the relation between Transpiration absorption experiment.

Reference Books:

1. Dr. Garg P. K. Biology – (Sôrô;kkkLk)
2. Trivedi J. J. & Dr. Vaidya R. M. – «k¶kurøkfSôhMkkÔýpk†
3. Dr. Sukkawala V. M. & Dr. Vaidya B. S. – Practical in Biology.
4. Prof. Pandya M. H. & Trivedi – «k¶kurøkfôLkMÄkríkÔk† (S.Y. B>Sc.)
FOCUS :-
This builds upon the elective course family first Aid subject taught simply but thorough & exhaustively.

OBJECTIVES:

- An endeavor has been made to simplify the study of first aid to the injured.
- By a knowledge of which trained persons are enabled to afford skilled assistance in cases of accident & sudden illness.

Unit - 1. Introduction to First Aid
- what is first aid , History , Principles, aims and importance of first aid.
- first Aid kits - At home
  - Holiday before you go
  - Emergency telephone list
  - Calling an Ambulance
  - Bandages and Bandaging
  - Types of Bandages , wound, dressing , Broken bones & Dislocation

Unit- 2. Common sense and Accident Prevention
- General Domestic Hazards
Electricity in the home- wining up appliances, fuses & fuse ratings.
Checking for safety - Adaptors
Gas in home - safety regulations , Gas leaks , regular servicing importance of ventilation.

**Unit- 3. Dealing with an Emergency**

- Action & Treatment priorities , Fire , electric shock , Car accidents , Drowning, Breathing problems , No heart beat or pulse, Heart attack , Bleeding , shock, fracture, strain & dislocations, choking, Burns , poisoning , unconsciousness.

**Unit- 4. First Aid Treatment & self Help.**


**References:**

- First Aid to the Injured.
- The Home Library First Aid
  Brian ward octopus Books
- Family First Aid & Emergency Hand book
  Dr. Andrew stanway , Sheldon press , London
- "ઉકેલ આવતા પંચવા"
  ડો. પ્રિયાશ્રી કરુણા શેખર, નવાજદન પ્રકાશન મંડળ અમદાવાદ
- "અહેવાલ માં પ્રાથમિક મહત"
  ભારતીય સેન્ટ જોહન અમ્બુલાન્સ કોસોસિયાલ્સન ની ગુજરાતી આવિર્ભાવી વોલ્લ દોઝલી
- " અહેવાલ માં તાકાતિક ઉપાય"
  ડો. રૂપાનાથ ગંગારામ , સંસ્થત સાહિત્ય વચ્ચે દોઝલી.
(Family and Community Sciences)

Home Science Undergraduate Programme for General Home Science
(Composite) Curriculum as per the choice based credit system
(Implement from June 2018)

T.Y. B. A. HOME SCIENCE PROGRAMME

COURSE STRUCTURE FOR C.B.C.S

SEM-V

<table>
<thead>
<tr>
<th>Sr. No.</th>
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<td>Core 301</td>
<td>Food Preservation &amp; Confectionery</td>
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<td>Core 302</td>
<td>Housing &amp; Space Designing</td>
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<td>Core 303</td>
<td>Family Health &amp; Welfare</td>
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<td>Core Elective 305-Practical</td>
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<td>Core Elective 306</td>
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FOCUS:

This course builds upon the Essay writing & Research paper in various subjects of Home science. The course focuses on UGC & NET/SLET syllabus. so this course manifests students ability to present their thoughts on a particular topic.

OBJECTIVES:

- To Develop the process of writing an essay and strengthen their faculty of thinking.
- To Manifest students' ability to present their thoughts on a particular topic in a organized manner.
- To Make them aware about the various subjects of home science such as Food Adulteration, to understand the relation between sociological and psychological aspects of clothing & fashion design and knowledge of banking etc.
- To aware the students about food adulteration to its laws.
- To understand the relation between sociological & psychological aspects of clothing & fashion design.
- To enable the students with the applications about basic knowledge of banking & transaction.
- To provide knowledge related to human development & domestic violence.

1. Food Adulteration:
• Meaning & Definition of Food Adulteration.
• Importance of learning Food adulteration.
• Various food adulteration & different ways to find Food adulteration.
• Different laws of Food adulteration.

2. Sociological & psychological aspects of clothing:
   • Principles of clothing.
   • Selection of Fabrics for family.
   • Fashion design(fashion cycle, business, merchandising)

3. Banking Aspects:
   • Meaning and procedure of Banking.
   • Types of Accounts.
   • Banking transaction.
   • Types of Banking - (E banking and Paytm)

4. Human Development:
   • Domestic Violence- its Definition, causes, effects.
   • Prevention of Domestic violence and laws.
   • Women's Domestic violence and Helpline services.

5. Educational Research in Home science:
   • Meaning of educational research in Home science.
   • Importance of research.
   • Its need.
   • Types of research & its characteristics.

6. Market survey & Report writing:
   (Related to Research in Home Science)
   ➢ The report of the survey should be organized under the following broad headings:
     • objectives
     • Methods & tools(interview & questionnaires)
     • Records of data and information
     • Analysis of Data Interpretation and conclusion
References:

1. Foods & Food Adulteration  
   Author - Marvey Washington wiley
2. Some forms of food Adulteration and simple methods for their Detection  
   Author - Willard Dell
3. The social psychology of clothing & personal Adornment  
   Author - Kaiser ,Susan B
4. The social psychology of clothing  
   Author- Kaiser ,Susan B
5. Money Banking  
   Author -A Vasudevan
6. મેની વેલ્યૂ ટ૆સ્વાવા પ્લેન  
   Publisher- Taxman Publication, Indian institute of Banking & Finance
7. Domestic Violence  
   Publisher - David M Haugen
8. કૉંગ્લેસિયામાં અને સુધારાથી સંદેશાઓ  
   સ્વિના પ્રશંસા
9. સંશોધન ની પાદાર્થ સંક્રમણઓ  
   Author- Dr. R.S.Patel , Jay Publication Ahmedabad
10. સંશોધન ની પાદાર્થ સંક્રમણ  
    Author- Dr. R.S.Patel