

BERHAMPUR UNIVERSITY, ODISHA

**COURSES OF STUDIES
FOR
THE B.A/B. Sc. IN HOME SCIENCE (Hons)
(Choice Based Credit System)**

1st and 2nd Semester Examination - 2016

3rd and 4th Semester Examination - 2017

5th and 6th Semester Examination - 2018



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COURSE STRUCTURE OF CHOICE BASED CREDIT SYSTEM SYLLABUS FOR + 3 DEGREE IN B.A/B. Sc HOME SCIENCE (HONS) FOR BERHAMPUR UNIVERSITY, ODISHA

Home Science Education is a *Worth Life Education*. It is a mission-oriented field with goals of enabling families to be more self-sufficient, developing the full potential of all human beings. Home Science Education aims at equipping students with requisite knowledge and necessary skills to bring socio-economic progress at Individual, Family, Community and National level. It prepares Home Science professionals as agents of social change to optimize human potentials through interdisciplinary knowledge, education and training.

Core Course (CC)-14 papers of 6 credits each.

Discipline Specific Elective (DSE) - 04 (3 theory papers + project) of 6 credits.

Generic Elective (GE): 4 papers of 6 credits each (From other two Disciplines - A & B)

Ability Enhancement (AE): 2 papers of 2 credits.

Skill Enhancement Course (SEC): 2 papers of 2 credits.

Total Papers - (4+4+5+5+4+4) = 26 Total Marks: 2400

Total Credit Points: 140 (In all Six semesters)

Semester-I

Sl No	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-1	Fundamentals of Food & Nutrition	Theory & Practical	4+2=6	60	75+25=100
2.	CC-2	Human Physiology	Theory & Practical	4+2=6	60	75+25=100
3	GE-1	A - 1	Theory	6	60	100
4.	AE-1	Environ Studies	Theory	2	20	50
		Total papers-4	-	20	200	350

Semester-II

Sl no	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-3	Human Development	Theory&Practical	4+2=6	60	75+25=100
2.	CC-4	Introduction to Textiles	Theory&Practical	4+2=6	60	75+25=100
3.	GE-2	A - 2	Theory	6	60	100
4.	AE-2	MIL Communication	Theory	2	20	50
		Total papers-4		20	200	350

Semester-III

Sl no	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-5	Family Resource Management	Theory&Practical	4+2=6	60	75+25=100
2.	CC-6	Marriage & Family Studies	Theory&Practical	4+2=6	60	75+25=100
3.	CC-7	Extension Communication & Development	Theory&Practical	4+2=6	60	75+25=100
4.	GE-3	B - 1	Theory	6	60	100
5.	SEC-1	Communicative English	Theory	2	20	50
Total papers - 5				26	260	450

Semester – IV

Sl no	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-8	Laundry Science	Theory &Practical	4+2=6	60	75+25=100
2.	CC-9	Child Development	Theory &Practical	4+2=6	60	75+25=100
3.	CC-10	Maternal & Child Nutrition	Theory &Practical	4+2=6	60	75+25=100
4.	GE-4	B - 2	-	6	60	100
5.	SEC-2	Food Technology	Theory	2	20	50
Total papers -5				26	260	450

Semester – V

Sl no	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-11	House Planning	Theory&Practical	4+2=6	60	75+25=100
2.	CC-12	Clothing and Fashion Design	Theory&Practical	4+2=6	60	75+25=100
3.	DSE-1	Early Childhood Care Or Entrepreneurship for Small Catering Units	Theory	6	60	100
4.	DSE-2	Non-formal Adult & Life Long Education Or Women's Studies	Theory	6	60	100
Total papers-4				24	240	400

Semester – VI

Sl. no	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-13	Community Health and Nutrition	Theory&Practical	4+2=6	60	75+25=100
2	CC-14	Personal Finance & Consumer Studies	Theory&Practical	4+2=6	60	75+25=100
3.	DSE-3	Interior Design & Decoration Or Therapeutic Nutrition	Theory	6	60	100
4.	DSE-4	Project Work	Project +VV+ Seminar	6	60	50+20+30 =100
		Total papers-4		24	240	400

Detail Course for B. A / B. Sc (Honours) Home Science

Core Course - CC1: Fundamentals of Food & Nutrition

Credit points - (Theory 04 +Practical 02) = 06

Learning Outcomes:

1. Understand the concept of nutritive constituents of food and food groups.
2. Gain knowledge about methods of cooking and its impact on nutritional quality of food.
3. Have fair idea of an adequate diet and importance of balance diet and planning.

UNIT-I

- **Introduction to Food, Nutrition, & Nutrients:** Definition of Food, Nutrients. Nutrition & malnutrition. Guide lines for good health.
- **Study of foods:** Importance classification and functions of food.

UNIT - II

- **Study of Nutritive Constituents of Food:**
 - ✓ Classification, function, sources, requirements & deficiency of proteins, fats and carbohydrates.
 - ✓ Classification of vitamins - Fat soluble vitamin and water soluble vitamin, functions, sources, deficiency, requirements of fat soluble vitamins A, D, B & K. and water soluble vitamins - B₁, B₂, Niacin, B₁₂ and vitamin C.
 - ✓ Functions, sources, deficiency and requirements of minerals - Calcium, Iron, Iodine.

UNIT - III

- **Food Groups** - Basic Food Groups (four, five and seven) and their nutritive contributions.
- **Menu Planning** - Meaning, Significance, Principles and factors affecting menu planning.

- **Balanced diet** – Meaning & Importance. Dietary guidelines for planning balanced diet for pre-school child, adolescent boys and girls, adult man woman of different work habit.

UNIT - IV

- **Methods of Cooking** –
 - ✓ Dry, moist, frying and microwave cooking
 - ✓ Advantages, disadvantages and the effect of various methods of cooking on foods
 - ✓ Nutrient losses in cooking and enhancing the nutritional quality of foods
- **Food Preservation** - Meaning, principle and importance of food preservation. Household methods of preservation (pickling, refrigeration, dehydration, pasteurization and use of chemical preservatives).

Practical: Marks - 20 (Exam) + 5 (Record) = 25

1. Planning and preparation of balanced diet and calculation of nutritive value of various nutrients for the following groups – man and woman of different work habits, adolescent boys and girls (vegetarian and non-vegetarian).
2. Prepare at least one item from each methods of cooking (Boiling, steaming, stewing, shallow fat and deep fat frying, roasting, grilling and microwave cooking).
3. Preparation of pickles, sauce and squash from seasonally available fruits and/or vegetables at least one from each.

Core Course – CC2: Human Physiology

Credit points - (Theory 04 +Practical02) = 06

Learning Outcomes:

1. Understand the physiology of human body.
2. To provide information about the functioning of different system in the human body.
3. Understand the nature and role of micro-organism.

Unit -I

- Human Cell: Its structure and functions, cell division.
- The Respiratory System: Structure and functions of lungs, mechanism of respiration, external and internal respiration, vital capacity, and other volumes.

Unit -II

- Blood: Composition, Structure and Functions of RBC, WBC, Blood Platelets, Blood Groups and Rh factor.
- The Cardiovascular System: structure of arteries, veins and capillaries, structure of the Heart, Cardiac cycle, Blood circulation: Pulmonary, Coronary, Portal, Systemic Circulation.

Unit -III

- The Excretory System: Structure and Functions of kidney, bladder, mechanism of urine formation, role of Kidney in homeostasis. The Skin: Structure and functions of the skin, regulation of body temperature.
- The Digestive System: Structure of different parts of alimentary canal, digestion of proteins, fats and Carbohydrates.

Unit - IV

- The Endocrine System: The location and functions of various endocrine glands – Pituitary, thyroid, Parathyroid, adrenal, Iselets of Langerhans, Gonads.

- Reproductive System: Structure and functions of sex glands and organs (male and female), Menstrual Cycle, physiology of pregnancy, parturition, lactation and menopause.

Practical: Marks - 20 (Exam) + 5 (Record) = 25

1. Preparing a poster showing parts and functions of human heart.
2. Preparing a poster showing Digestive System of Human body.
3. Preparing a poster showing the respiratory system of Human body
4. Preparing a chart on reproductive system.

Core Course - CC3: Human Development

Credit points - (Theory 04 +practical02) = 06

Unit I

Introduction to Human Development:

- Definition, History and Interdisciplinary nature of Human Development
- Scope of Human Development in contemporary society
- Domains, Stages (periods)and Contexts of Human Development
- Principles of Growth and Development

Unit II

Prenatal Development, Birth and the Neonate:

- How life begins - Importance of Conception - heredity endowment, sex determination, number of offspring, ordinal position
- Pregnancy - Sign, symptoms and complications during pregnancy
- Birth of the Baby - Types of birth and complications.
- Capacities and care of the new born.

Unit III

Prenatal Growth & Development:

- Meaning of prenatal Growth and Development
- Stages - Period of ovum, Period of embryo and Period of foetus.
- Prenatal environmental influences: Maternal age, nutrition, drugs irradiation, alcohol, smoking, maternal emotions, maternal health, Rh factor, diseases and birth hazards.
- Hazards during prenatal period - Physical and psychological.

Unit IV

Infancy:

- Characteristics and adjustments of Infancy`
- Physical Development: Physical growth cycle, body size, body proportions, bones, muscles and fat, development of nervous system.
- Motor development: Principles of motor development, sequence of motor development.
- Hazards of Infancy

PRACTICAL:**Marks - 20 (Exam) + 5 (Record) = 25**

1. Prepare a report on the growth chart of five infants and analyzed it.
2. Observe the problems and issues of new born children.
3. List the cultural practices related to pregnancy and child birth.
4. Plan and develop activities to facilitate child development in different domains.
5. Preparation of educative materials for parents of young children (poster, toys etc)

Core Course - CC4: Introduction to Textiles**Credit points - (Theory 04 +Practical02) = 06****Learning Objectives:**

1. Acquaint with the different textiles and their performances.
2. Impart knowledge on different textile finishes.
3. To acquaint with proper notion regarding choice of fabrics.

Unit I**Introduction to textile fibres:**

- ✓ Morphology of textile fibres
- ✓ Primary and secondary properties
- ✓ Fibre classification

Unit II**Production, chemistry, properties and usage of fibres:**

- ✓ Natural fibre: Cotton, Flax, Silk and Wool
- ✓ Man-made fibers: Rayon, Polyamides, Polyester, Acrylic, Olefins (Polyethylene and Polypropylene) and elastomeric fibres

Unit III**Production and properties of Yarns:**

- ✓ Yarn construction: Mechanical Spinning (Cotton system, Wool system, Worsted system) Chemical Spinning (Wet, Dry, Melt)
- ✓ Types of yarns: Staple and Filament, Simple yarns, Complex yarns
- ✓ Yarn Properties-Yarn Numbering, Yarn Twist
- ✓ Textured yarns: Types and properties
- ✓ Difference between Threads and Yarns
- ✓ Blends: Types of blends and purpose of blending

Unit IV**Techniques of fabric construction Weaving:**

- ✓ Parts of a loom
- ✓ Operations and motions of the loom
- ✓ Classification of weaves- construction, characteristics, usage
- ✓ Knitting - Classification of knits, Construction and properties of warp and weft knits
- ✓ Non-wovens - Types, Construction, Properties and usage

Basics of Wet Processing:

- ✓ Classification and uses of finishes
- ✓ Fundamentals of dyeing and printing

PRACTICAL:

Marks - 20 (Exam) + 5 (Record) = 25

1. Fibre Identification tests -Visual, burning, microscopic and chemical
2. Yarn Identification - Single, ply, cord, textured, elastic, monofilament,
3. Thread count and balance
4. Weaves –One sample from each type
5. Tie and Dye

Core Course - CC5: Family Resource Management

Credit points - (Theory 04 +practical02) = 06

Learning Outcomes:

1. To create an awareness among students about management of family as well as other systems.
2. To recognize the importance of wise use of family resources in order to achieve family goals.
3. Develop understanding to the application of management in home.

Unit - I

- Home Management - Meaning, definitions and process of management - planning, organising, implementing, controlling and evaluating.
- Motivating Factors of Management - Values, goals, standards.
- Decision Making - Importance, steps and types of decision making. Qualities of a Good Home Maker.

Unit - II

- Family Resources - Meaning, Classifications (human and non-human), characteristics of resources.
- Management of Specific Family Resources -
 - a. Time Management - Time plan, steps in making time plan, controlling and evaluation of time, peak load periods. Rest periods and leisure time.
 - b. Energy Management - Fatigue - Its type of reduction. Work Simplification - Definition, techniques of work simplification, Mundel's classes of change.

Unit - III

- Money Management - Family income: Definition and types of income, various way of supplementing the family income. Family Expenditure: Budgeting - Definitions, steps in making family budget, factors affecting the budget making.
- Household Financial records - Nature, purpose and types of account keeping system.
- Savings and Investments - Meaning, objectives and need to save, types of savings, various saving deposit schemes and institutions, functioning of commercial banks, L.I.C., post office and other insurances.

Unit - IV

- Supplementary Family Income – Meaning, significance, types of supplementary family income for different socio-economic group family.
- Application of Management Process in - Event Planning & Execution within family and community set up.

Practical:

Marks – 20 (Exam) + 5 (Record) = 25

1. Preparation of time plans for self and family
2. Prepare a daily Time Plan for activities of a women executive/a school teacher.
3. Preparation of poster showing energy management in household activities through Fatigue reducing technique – a) Use of both hands to cover normal and maximum work areas, b) Keeping body balance, c) Comfortable work heights for correct posture.
4. Time and Motion Study
5. Event planning, management and evaluation-with reference to Managerial process and Resource optimization - time, money, products, space, human capital

Core Course – CC6: Marriage and Family Studies

Credit points - (Theory 04 +Practical02) = 06

Learning Outcomes:

1. Gain knowledge about the concept of marriages, types and changing nature prevailing in the society.
2. Understanding regarding the requisite elements in selecting life partner,
3. Understand about the family in the context of changing social scenario of the country.
4. Aware of the issues involved in family life and prepare to face the problems of it.

Unit - I

- Marriage as an Institution - Meaning, significance, functions of Marriage in Indian context.
- Factors considered in the selection of mate or life partner for both male and female. Types of Marriages – Arranged, Free choice or love marriage and Love-cum arranged marriage their merits and demerits.

Unit - II

- Significance of Marriage Rituals and Ceremonies among various Indian communities: A) Hindus, B) Muslims, and C) Christians.
- Adjustments in marriage- Sex, financial, in laws & among working couples.
- Changes in Marriage system in India – Role of matrimonial advertisement.

Unit - III

- Family - Meaning, Definition, Importance, Characteristics and Functions of Family.
- Types of Family - Joint and Nuclear Family: their characteristics, merits and demerits.

- Disintegration of Joint Family System in India – Meaning, causes and consequences.

Unit - IV

- Family Life Cycles - Meaning, importance, stages of family life cycle (beginning, expanding, contracting, and contracting).
- Problems of Family Life – Marital disharmony, Accident, Prolonged illness, Dowry, Divorce, Family violence, Bereavement, Suicide, Economic distress, Drug and alcohol abuse.

Practical:

Marks – 20 (Exam) + 5 (Record) = 25

1. Prepare a record/album of marriage rituals of Hindu, Muslim and Christian Marriage.
2. Prepare a poster showing the contemporary forms of families existing in India.
3. Record the newspaper clippings of marital and family problems/issues. Discuss the ways to resolve the problems.
4. Prepare a list the Family Developmental Tasks across Life Span and present it in poster form.
5. Discuss and discourse on merits and demerits of types of marriages – Arranged, free choice, and arranged-cum-love marriage.

Core Course – CC7: Extension Communication and Development

Credit points - (Theory 04 +practical02) = 06

Learning Outcomes:

1. Understand the widening concept of extension education among the rural mass.
2. Develop skills to be an effective extension worker.
3. Aware of the prevailing conditions and status of people in the community with special reference to poverty, gender and environment.

Unit - I

- Meaning, philosophy, objectives and principles of Home Science Extension Education. Principles of Extension work in the Rural areas.
- Communication – Meaning, definitions and types of communication. Importance of Communication in Extension Work. Functions and barriers of Communication.
- Elements of communication. Models of communication-Aristotle, lasswell, sharron and weaver, schramm, Berlo, Legan, Roger’s & shoe maker’s models of communication.

Unit - II

- Extension Education - Definition & Types of Education. Definition, Types, scope needs objectives, philosophy& principles of extension education. Behavioral changes brought about by extension education.
- Extension Teaching Methods – Individual (home visits, telephone calls, personal letters). Group Methods (lecture, method demonstration, field trip, seminars, workshop, group discussion, conferences). Mass method (Surveys, Newspaper, leaflets).
- Use of Audiovisual Aids – Meaning and definitions, their use in extension education, advantages and disadvantages. Types – Radio, recordings, posters, charts, bulletin board, flash cards, puppets of different types, television, and films.

Unit - III

- Teaching-Learning process - Meaning. Principles & steps in extension teaching Criteria for effective extension teaching. Elements of a learning situation. Criteria for effective learning. Principles of learning as applicable to extension.
- Diffusion and adaption- Attributes of innovation, concept and elements of diffusion. Adaption - Characteristics, stages and factors associated with adaption. Sources of information.

Unit - IV

- Community Development - Definitions, objectives and principles of Community development in India. Areas of Community Development.
- Role of Community Development workers.
- Role of Home Science Education in Community Development - Role of ICDS, MahilaMandal, Self-Help Groups, NGO's, Panchayat Raj and Mission Shakti in Community Development.

Practical:

Marks - 20 (Exam) + 5 (Record) = 25

1. Preparations of leaflets, chart and puppet on any topic related to Home Science.
2. Writing of short story which gives some message to the community regarding best practices on community health, nutrition and development.
3. Preparation of immunization card up to 5 years old child.
4. Preparation of tools for conducting base line survey of villages, identifying needs of selected families and compilation of information.
5. Conduct household surveys and organising group demonstrations.

Core Course - CC8: Laundry Science

Credit points - (Theory 04 +practical02) = 06

Learning Outcomes:

1. Acquaint with materials, reagents, equipments and process involved in laundry.
2. Understand the differences in laundering process used for different fabrics.
3. Gain knowledge to maintain the clothing's of different nature.

Unit - I

- Principles and methods of washing and their application.
- Washing and finishing of cotton, silk and wool.
- Laundry equipment: storing, steeping, washing and drying equipment.

Unit - II

- Laundry Materials: Water - Hard water & soft water, Removal of hardness of water. Soaps and detergents - Types, Properties. Nature of a good soap. Bleaching Agents: Oxidizing and reducing bleaches.
- Stiffening agents- Purpose and types of stiffening agents. Method of preparation (boiling & cold).

- Laundry Blues-Purpose of applications. Types and process of bluing in laundry work.

Unit - III

- Stain Removal - Definition, types, general rules of removing stains, methods of removing following stains – Blood, egg, tea, coffee, ink, nail polish, curry, paint.
- Dry cleaning: Meaning, dry cleaning agents – Solvents and absorbents, advantages and disadvantages of dry cleaning.

Unit - IV

- Washing & finishing of Cotton, Silk & Wool.
- Storing and care of clothes – Cotton, Silk and Woolen.
- Washing Machine – Types and functions.

Practical:

Marks - 20 (Exam) + 5 (Record) = 25

1. Identification of wool, cotton, silk by visual microscopic burning tests.
2. Washing and finishing of cotton, silk and wool.
3. Stain Removal on different fabrics – Ink, tea/coffee, curry, nail polish, blood etc.
4. Preparing stiffening agents – cold and boiling.
5. Designing storing cupboard for clothing's.

Core Course - CC9: Child Development

Credit points - (Theory 04 +Practical02) = 06

Learning Outcomes:

1. To develop an understanding of the major concepts and process of child growth and development.
2. To have a fair knowledge regarding the developmental milestones up to years two years of age.
3. To develop sensitivity to the socio-cultural contexts of child behavior and development.

Unit - I

- Meaning, definition, principles and scope of Child development.
- Role of nature and nurture in Child growth and development.
- Developmental Milestones of Children – Meaning, significance and nature.

Unit - II

Developmental Milestones (First Five Years):

- Physical Development - Physical growth cycles, body size, body proportions, bones, muscles and fat, teeth, development of the nervous system.
- Motor Development – Meaning, principles and sequence of motor development.
- Speech Development – Meaning of speech, pre-speech forms of communication, essentials in learning to speak, major tasks in learning to speak, speech disorders.

Unit - III

- Emotional Development- Definition, Common emotional patterns and characteristics of children emotions.
- Social Development - Meaning, process and importance early social experiences. Factors influencing social development.

Unit - IV

- Play - Definition, values, characteristics and types of play. Selection of suitable play material and equipment for various age groups and their significance for child development.
- Childhood Interest - Meaning, types and significance in child's life.
- Role of family in child development.

Practical:

Marks - 20 (Exam) + 5 (Record) = 25

1. Prepare two different play materials for children out of waste materials having some educational value.
2. Prepare a poster showing different emotions of children (positive and negative).
3. Explain the role of nature and nurture through diagrammatical presentation.
4. Observing and recording physical and motor development of children from Zero to five years.
5. Conduct a test to assess the verbal ability (pronunciations and vocabulary) among three to five years children.

Core Course - CC10: Maternal & Child Nutrition

Credit points - (Theory 04 + practical 02) = 06

Learning Outcomes:

1. Understand the nutritional requirements of pregnant, lactating, preschool and school going children.
2. Impart knowledge about the consequences of the deficiencies on each of these groups.

Unit - I

- Nutrition and Food Requirements for Expectant Mother -
 - ✓ Physiological changes
 - ✓ Food and Nutrient Requirements of expectant mother
 - ✓ General dietary problems and complications.
 - ✓ Deficiency of nutrients and its impact - energy, iron, folic acid, protein, calcium, iodine.
- Common problems of pregnancy and their management - nausea, vomiting, food aversions, pregnancy induced hypertension, obesity, diabetes.

Unit - II

- Nutrition and Food Requirements for Lactating Mother -
 - ✓ Food and Nutrient Requirements of lactating mother

- ✓ Food supplements
- ✓ Role of hormones in milk production
- Nutrition During Infancy -
 - ✓ Growth and Development During Infancy
 - ✓ Food and Nutrient Requirements of infants
 - ✓ Low Birth Weight and Preterm Baby
 - ✓ Weaning

Unit - III

- Nutritional Needs of Toddlers and Pre-school Children (2 to 5) -
 - ✓ Growth and development during toddlerhood and pre-school years.
 - ✓ Food and Nutritional Requirements
 - ✓ Development of Food habits and choices.
 - ✓ Common nutritional problems.
- Nutrition and Food Requirements for School Children (6 to 12) -
 - ✓ Food and Nutrient Requirements of School children
 - ✓ Packed snacks and lunches
 - ✓ School lunch programmes.

Unit - IV

- Nutritional Health Status of Mothers in India
- Nutritional Health Status of Children in India
- Factors affecting maternal and child mortality and morbidity in India.

Practical:

Marks - 20 (Exam) + 5 (Record) = 25

1. Planning and preparation of balanced diet and calculation of nutritive value of various nutrients for pregnant and lactating women (for different SES).
2. Planning and demonstration of low cost nutritious recipes for infants, preschool and school going children.
3. Preparing lunch box for school going children.
4. Preparing low-cost protein rich food items for pregnant women.
5. Preparing list of weaning foods for toddlers.

Core Course - CC11: House Planning

Credit points - (Theory 04 +practical02) = 06

Learning Outcomes:

1. Gain knowledge in principles of planning residential house.
2. Be able to choose furnishing materials keeping the financial considerations in mind.
3. Develop the skills of interior decoration of residential house.

Unit - I

- Selection of site for Residential House - Factors to be taken into consideration for selection of a site for construction of a house.
- Construction of a House -Principles of residential planning. Estimating the cost of construction. Ways and means of economy (cost reduction).
- Internal House Planning of Different Units of the House – Verandah, living/drawing room, bed room, kitchen, bath rooms. Other accessory parts as staircase, children’s room, study, store &pooja room.
- Building materials used for construction of the house.

Unit - II

- House wiring - Electrical fittings and fixtures; Location& fixing of main meter box. Safety measures to be taken during electrical accidents.
- Functional designing of work areas and storage/space management.
- Kitchen Planning – Designing kitchen (materials used at work centres, floor, walls, plumbing, ventilation, acoustical measures), Types of kitchen (U shape, L shape, two-wall and one wall). Factors to be considered while planning for a kitchen in Indian households.

Unit - III

- Interior decoration: Definition and objectives of interior decoration.
- Elements of Art - line, form, texture, space, colour, light, pattern etc. and their applications.
- Principles of Design - Proportion, balance, rhythm, harmony and emphasis. Their application in homes; Colour, properties of colour: hue, value and intensity; Colour schemes.

Unit - IV

- Study of colour: Importance and use of colours. Characteristics of colour, various colour combinations.
- Different types of flower arrangements - Line, mass, oriental and dry arrangements and Accessories.
- Household Equipment – Factors to be considered in purchasing household equipments, types – electrical and non-electrical, care and maintenance.

Practical:

Marks – 20 (Exam) + 5 (Record) = 25

1. Making of house plans for different income levels;
2. Layout of different types of kitchens – U shape, L shape, Corridor and One wall type.
3. Planning colour schemes for preparing Alpana and rangoli/Pottery painting and decoration;
4. Paper cutting for decorating a house for special occasions, use of waste materials for making utility and decorative articles/ napkin folding/Drying and preservation of flowers and foliage.
5. Flower Arrangements - Decorative uses of ornamental plants, seasonal flowers and foliage

Core Course - CC12: Clothing & Fashion Design

Credit points - (Theory 04 +Practical02) = 06

Learning outcomes:

1. To understand the socio psychological aspect of clothing.
2. To learn the contemporary fashion design and its uses.
3. Be able to choose the right kind of clothing for different age group.

Unit - I

- Socio-Psychological aspect of Clothing – Perception, Behavior, Choice, motivation, shopping behavior and satisfaction, age differences.
- Design in dress – personality, figure, the material, prevailing style, suitable decorations.

Unit - II

- Clothing for Infants: Factors considered during selection of infants clothing,-purchasing the layette (Gowns and wrappers, shirts, diapers, slippers, sweaters, bibs, shoes, baby blankets, towels).
- Clothing for School Children – Factors affecting children’s clothing.
- Clothing for Adolescents– Factors affecting selection of adolescents clothing (Occasion, season, figure, fitting of the garments, fashion)

Unit -III

- Dress for Occasions – Meeting or interviews, work place, party, travel, sports and accessories.
- Clothing Management – Management responsibilities in clothing a family, family resources affecting clothing management.
- Selection and care of home Furnishing – Bed-linen, bed sheets, bed spreads, blankets, pillow covers, Table -linen, towels (hand and face towels, bath or Turkish towels, kitchen towels)

Unit - IV

- Fashion – Terminology, Fashion cycle, Sources of fashion, Factors favouring and retarding fashion
- Role of a Designer, Leading Fashion centres and designers
- Design – Elements and principles of design, Structural and applied design

Practical:

Marks – 20 (Exam) + 5 (Record) = 25

1. Prepare an album of children’s clothing(preschool children)
2. Collect the data on adolescent’s clothing preferences.
3. Study of collections of famous designers
4. Interpretation of elements and principles of design concepts from print and visual mediums

5. Design home furnishing with specific logo/motif (Sofa cover/Cushion/pillow cover etc)

Core Course – CC13: Community Health and Nutrition

Credit points - (Theory 04 +Practical02) = 06

Learning Outcomes:

1. To understand the concept of community health& Health for all.
2. To appreciate the various Methods of cooking, nutritional Status and supplementary nutrition programmes.
3. To be able to assess the nutritional status.
4. To be able to know about National & International Nutritional Agencies.

Unit - I

- Concepts of Community Health and Nutrition – Definition and meaning of community health.
- Components of Health – Physical health, mental health social health and spiritual health.
- Determinants of health – Heredity, Environment, lifestyle, economic status, provision of health Services Community Nutrition -Meaning,significance and scope of community Nutrition.

Unit - II

- Common Nutritional Problems in India – Low Birth weight, Protein–energy malnutrition, Vitamin A deficiency, Nutritional anemia, Iodine deficiency disorders.
- Assessing Nutritional Status –Objectives and importance
- Methods of assessment -
 - a. Direct - Clinical signs, nutritional anthropometry, biochemical tests, biophysical tests.
 - b. Indirect - Diet surveys, vital statistics

Unit - III

- Nutrition Education-Meaning, objectives, principles& importance of nutrition education for community health in India.
- Supplementary Nutrition Programme - Objectives of Nutrition Programme, Programmes to control Malnutrition – Integrated Child Development Services (ICDS), Public Distribution System (PDS), Annapurna Scheme, National food for work programme , Antyodaya Anna Yojana (AAY)

Unit - IV

- Role of International and National agency in Combating Malnutrition - World Health Organization (WHO), Food and Agriculture Organization (FAO), United Nations International children’s Education fund (UNICEF), Cooperatives for Assistance and Relief Everywhere(CARE).
- National Agencies and their functions - Indian Council of Agriculture Research(ICAR), Indian Council of Medical Research (ICMR), National Institute of Nutrition (NIN). National Institute of Public Cooperation and Child Development(NIPCCD).

Practical:**Marks – 20 (Exam) + 5 (Record) = 25****1. Assessment of Nutritional Status:**

- Anthropometry - weight and height measurements
- Plotting and interpretation of growth charts for children below 5 years
- Identification of clinical signs of common nutritional disorders

2. Assess the nutritional status of selected group of the community through diet survey.**3. Planning and conducting a food demonstration.****4. Prepare Nutrition education materials (posters/charts/leaflets) to be imparted to urban and rural community.****5. Visit to ICDS/PHC/MHC to observe and prepare a report on the supplementary feeding or prophylactic program.****Core Course – CC14: Personal Finance & Consumer Studies****Credit points - (Theory 04 +Practical02) = 06****Unit I****Income and Expenditure:**

- Household Income - Types, Sources, Supplementation of family income, use of family income, budgets, maintaining household accounts
- Factors influencing expenditure pattern
- Family savings and investments- need ,principles, channels of investment, tax implications
- Consumer credit- need, sources, credit cards, Housing finance
- Personal finance management - tax implications, calculation of personal income tax
- Guidelines for wise buying practices

Unit II**Consumer in India:**

- Definition of a consumer and consumer behaviour
- Consumer Needs - Needs and Goals of consumer Interdependence of needs and goals.
- Characteristics and Types of consumer needs – physiological, safety, social, egoistic needs, needs for self-actualization.
- Consumer choice - Need for intelligent choice .Factors influencing consumer choice.
- Purchase Decision of a Consumer- Meaning of purchase decision of a consumer. Guidelines for wise purchase, consumer problems-types, consumer Aids – Advertisement, brands, Trademark .Quality mark, labels, packaging.

Unit III**Consumer Problems and Education:**

- Role of consumers in the economy, National Income, Per Capita Income, Household wise distribution of income
- Changing nature of the business world -e-commerce, e-business

- Types of consumer problems - products and service related, investment and infrastructure related, Causes and solutions
- Consumer education and empowerment

Unit - IV

Consumer Protection:

- Consumer protection
- Consumer rights and responsibilities
- Consumer organizations - origin, functioning, role and types.
- Consumer cooperatives - role, history and growth in India, PDS KendriyaBhandars.
- Basic legislative framework for consumer protection in India, Consumer Protection Act 1986 COPRA, Alternative redressal mechanisms, Mediation centres
- Standardization and quality control measures: ISI, FPO, AGMARK, ISO, Eco mark, Wool mark, Silk mark, Cotton mark, Handloom mark, BEE star labelling and others
- Regulations on Food Labeling and Claims: FSSAI, Codex for consumers

PRACTICAL:

Marks - 20 (Exam) + 5 (Record) = 25

1. Evaluation and designing of advertisements in the print media including products, services and social ads.
2. Evaluation and designing of informative and attractive labels of different type of food products.
3. Case study of banks and post offices to understand their services and products, Learning to fill different bank forms
4. Analysis of consumer redressal through case study approach under CPA.
5. Food adulteration tests

Discipline Specific Elective (DSE) - 1: Early Childhood Care

Credit points - Theory =06

Learning Outcomes:

1. Develop awareness regarding early childhood years.
2. Understand the issues and aspects of child care.
3. Understand the significance of early child care for growth and development.

Unit - I

- Early Childhood Years – Meaning, definitions and significance
- Universal Needs and Rights of Children.
- Children’s Environment – Meaning, importance and role of Parents, Family and Community in creating stimulating environment for children.

Unit - II

- Early Childhood Care – Meaning, Importance and scope of early childhood care in India.
- Status of Children in India – Nutritional, health, social and educational.

- Child Rearing Practices – Meaning, significance and aspects and factors affecting child rearing practices.

Unit - III

- Nutritional Health Care – Meaning, Significance of Nutritional Requirement, Dietary Patterns and Food Selection, Developing Healthy Food Habits, Nutritional Problems during Early Childhoods.
- Immunization for Children – Meaning, significance and Immunization chart for first five years.
- Psychological Care – Conditions Contributing to Mental Wellbeing of Children, Role of Family Relationships in Psychological Care.

Unit - IV

- Children’s Play – Meaning, significance, types and factors affecting selecting play materials and equipment for young children.
- Childhood Interests – Meaning, Significance and types of childhood interests.
- Child Welfare programs in India – Existing child welfare services and programs.
- Provisions and Policies for Child Care and Development in India - Constitutional Provisions, Legislative Provisions and National Policy for Children – 2013

OR

DSE-1: Entrepreneurship for Small Catering Units

Unit I

Introduction to Food Service Units

- Origin of Food Service units
- Kinds of food service units

Menu Planning

- Importance of menu,
- Factors affecting menu planning,
- Types of menu

Unit - II

Organization & Management

- Principles of management
- Functions of management
- Financial Management

Food Production Process

- Food purchase and receiving
- Storage
- Quantity food production: Standardization of recipes, Recipe adjustments and portion control, Quantity food production techniques
- Food service

- Food hygiene and sanitation

Unit III

Space and Equipment

- Types of kitchen areas, Flow of work and work area relationship
- Equipment
 - a) Factors affecting selection of equipment
 - b) Equipment needs for different situations

Personnel Management

- Functions of a personnel manager,
- Factors to consider while planning the kind and number of personnel: Menu, type of operations, Type of service, Job description and job specification

Unit -IV

Planning of A Small Food Service Unit

- **Preliminary Planning**
Survey of types of units, identifying clientele, menu, operations and delivery
- **Planning the set up:**
 - a) Identifying resources
 - b) Developing Project plan
 - c) Determining Investment

Development of a business plan

Specific Elective (DSE) – 2: Non-Formal Adult & Lifelong Education

Credit points - Theory =06

Unit I

Non Formal Education:

- Difference between formal & Non-Formal Education, Significance of Non-Formal Education in India
- New education policy & NFE
- Scope of NFE in communities- Techniques of community study, Domains of Non-Formal Education
- Organizing NFE programmes- target group; Physical aspects; organizing and implementation
- Publicity of Non-Formal Programme; Planning and implementing publicity plan

Unit II

Adult Education:

- Meaning, concept and scope of Adult Education
- Adult Education programme in India
- Adult Education and Extension

- Characteristics of Adult Learners; Difference between Adult & Child learning
- Learning theories; Characteristics of Adult learning, developmental tasks of Adults
- Factors associated with Adult learning.
- Motivating and sustaining Adult learners

Unit III

Life Long Education:

- Definition, meaning and concept of Life Long Education
- Life Long Education: Historical and contemporary perspectives
- Components and objectives of Life Long Education
- Significance of Life Long Education in contemporary society
- Forms and domains of Life Long Education
- Principles of Life Long Education

Unit IV

Methods and Material for Non Formal/Adult/ Life Long Education:

- Methods and approaches for organizing NFE programmes for different target groups
- Scope of communication methods and materials for NFE objectives

Programmes of Non Formal/Adult/ Life Long and Continuing Education:

- National and international programmes
- Local, State , National and international agencies- policy and programmes

OR

DSE- 2: Women's Studies

Learning Outcomes:

1. To acquire knowledge on women's position & status in the Indian society.
2. To be aware of women's issues & problems & learn to tackle/ solve the problems
3. To have knowledge about the legal rights & law concerned with women in India.

Unit -I

- Women's role and Status in the society- Status and position of women in different ages and in the contemporary society.
- Significant role of women in the family and Community.
- Women as potential contributors in the modern family.

Unit - II

- Woman Issues in India: (i) gender discrimination -causes and consequences
- Exploitation of women at home and work place.
- Violence against women - types, causes & consequences.
- Ways to tackle women's issues.

Unit -III

- Women's Empowerment: Meaning, characteristics and need for women's empowerment.
- Factors contributing to women's empowerment.
- Constraints preventing successful empowerment of women.

- Role of Govt. & other agencies in bringing women's empowerment - Dept. of WCD, NCW, CSWB. Women's welfare programs.

Unit - IV

- Problems of women in India -Psychological, financial, social, educational and child care problems for working women. Balancing work and family life.
- Major issues and concerns - Gender disparity, dual responsibility, Illiteracy, economic distress/poverty, social stigma, widowhood and ageing.
- Women & Law: Constitutional Rights and legal safe guards for women including working women.
- Hindu marriage Act, Hindu succession Act, Dowry prohibition Act, Domestic Violence Act-IPC(498-A), Suppression of Immoral trafficking of women, The family court Act.

Discipline Specific Elective (DSE) - 3: Interior Design & Decoration

Credit points - Theory =06

Unit: I

Introduction to foundation of art and design:

- Objectives of design : Beauty, Functionalism and Expressiveness
- Types of Design: Structural and decorative(Naturalistic, stylized,abstract and geometric; Modern and traditional design

Introduction to Elements and Principles of Design

- Elements of design: Line, Shape and form, Space, Pattern, Texture, Light, Color
- Principles of design: Balance, Harmony, Scale, Proportion, Rhythm, Emphasis

Unit II

Introduction to components of Interior Design:

- Meaning and significance of interior decoration
 - Surface in Interior: wall finishes, floor finishes, ceiling finishes
 - Types of Furniture and furnishings
 - Types of accessories

Home Furnishing:

- Objectives of planning and furnishing a home.
- Fabrics used for furnishings - kind of fiber, type of weaves, finishes applied to fiber and different type of fabrics.

Unit: III

Use of Colors in Home:

- Colour schemes and colour harmonies.
- Significance of colour in interior design.
- Decorative use of colour in the home.

Furniture arrangement-

- Principles of design applied to furniture arrangement.
- Fundamentals of furniture arrangement for various rooms.

- Guidelines for selection and purchase of furnitures.

Unit - IV

Lighting in the House:

- Types of lighting, lighting requirements for the average home.
- Rules for good lighting.

Flower arrangement:

- Types of flower arrangements at home
- Principles of flower arrangement.
- Care of flowers and equipment required for flower arrangement.

OR

DSE - 3: Therapeutic Nutrition

Unit I

- Diet Therapy - Glycaemic index, dietary supplements, Adjuncts to Diet Therapy, Food, and nutrition and drug interaction.
- Therapeutic Diet - Routine hospital diet, nutrition support service, malnutrition in hospital patients, pre and post-operative diets, immune nutrition, nutrition support in burn patients.

Unit II

- The Dietitian - Classification, roles and responsibilities, code of ethics, assessment and diet planning.
- Diet in Gastrointestinal Diseases - Indigestion, Peptic ulcer, Carcinoma of the stomach, Gastric surgery, Constipation, Diarrhoea, Lactose intolerance, Irritable bowel syndrome, Intestinal gas and Flatulence.

Unit - III

- Diet in Cardiovascular Diseases - Prevalence, clinical effects, risk factors, role of fat in development of Atherosclerosis, dietary management, hypertension, hypercholesterolemia, physical activity and heart disease.
- Diet in Diseases of Liver and Pancreas - Functions of liver, agents responsible for liver damage, damaged caused by liver, infective hepatitis, cirrhosis of liver, hepatic encephalopathy, cholecystitis and cholilithiasis, pancreatitis.

Unit - IV

- Diet in Diabetes Mellitus - Prevalence, types, etiological classification by WHO, etiology, symptoms, diagnosis, treatment, complications, gestational diabetes, alcohol and diabetes.
- Diet in Diseases of Kidneys - Functions of kidney, Glomerulo Nephritis, Nephrotic syndrome, acute renal failure, chronic renal failure, dialysis, Urolithiasis or urinary calculi.
- Dietary management in case of Febrile Diseases: Tuberculosis, Typhoid and Metabolic disorders like Gout Obesity and diabetes Mellitus.

Discipline Specific Elective (DSE) - 4: Project Work

Credit points - 06

Project +Via-voce +Seminar= 50+20+30=100 Marks

Suggested topics for the proposed Project Work.

1. Visiting and collecting data regarding food habits and patterns of women and children among urban, rural, tribal and slum areas and preparing a project report on it.
2. Development of a project proposal for establishment of a early childhood centre - Location and building, indoor and outdoor space, equipment and material, staff, budget, funding agencies, cost- benefit analysis; Legal and regulatory processing of the proposal for submission to government and non-government organizations.
3. Preparing a survey proforma and studying at least ten families (cross section of the family life cycle stages), family members at different stages and preparing the report.
4. Preparation of sample album of basic hand stitches, machine stitches, edge finishing, fullness, finishing of necklines, plackets, fasteners, mending and patching.
5. Documentation of Indian textiles and costumes of at least 10 states of India & discuss its speciality& popularity.
6. Preparing a project report based on news clippings of the recent domestic violence occurring in families of Odisha.
7. Visiting shops/workshops of household equipments and reporting on different aspects its functioning.
8. Visiting Banks/Insurance company/Post Office and reporting on different aspects of saving and Investment schemes.
9. Planning, conducting and reporting on exhibition on any topic of Home Science Education within the College campus.
10. Visit a departmental store & prepare a project report on the availability, popularity, nutritional value & use of ready-to -eat foods.
11. A study on the availability of preserved food (veg & non veg) in the local market.
12. Contemporary Indian Women: Characteristics & role in the Family.
13. Dowry & Family Violence.
14. Ageing problems and Challenges.
15. Career stress among young girl students (Age 16-20 Years).
16. Cuisine(cake/Pitha) of Odisha.
17. Importance of Sprouts, Yoghurt, fermented and germinated foods - Facts & fallacies.
18. Health benefits of spices.
19. Mushroom in our Diet.
20. Kitchen planning for healthy living

(These topics are indicative, students may choose any other topics of interest related to Home Science education)

Guidelines in the preparation of the project Report:

The project Report should in soft bound, containing the following features:

- Cover Page with Title of the Work and other details
- Content Page
- Declaration
- Chapter – 1- Introduction
- Chapter – 2: Review of Related Literature
- Chapter – 3: Methodology
 - ✓ Objectives of the Study
 - ✓ Research Plan – Area, sample, tools of the study
 - ✓ Data Analysis
- Chapter – 4: Results & Discussion
- Chapter – 5: Conclusion
- References
- Appendix

Project Report is of at least 30 typed pages A-4 size paper in 1" margin in all side. As per the nature & plan of the project necessary tables, figures, & pictures may be inserted.

Evaluation will be done by both internal and external examiner or as decided by the University.

BERHAMPUR UNIVERSITY

COURSES OF STUDIES FOR THE B.A/ B. Sc. IN HOME SCIENCE (REGULAR) (Choice Based Credit System)

**1st and 2nd Semester Examination – 2016
3rd and 4th Semester Examination – 2017**



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INDIA

**COURSE STRUCTURE OF CHOICE BASED CREDIT SYSTEM SYLLABUS
FOR + 3 DEGREE IN B.A/B. Sc (Regular)
HOME SCIENCE FOR BERHAMPUR UNIVERSITY, ODISHA**

Home Science Education is a *Worth Life Education*. It is a mission-oriented field with goals of enabling families to be more self-sufficient, developing the full potential of all human beings. Home Science Education aims at equipping students with requisite knowledge and necessary skills to bring socio-economic progress at Individual, Family, Community and National level. It prepares Home Science professionals as agents of social change to optimize human potentials through interdisciplinary knowledge, education and training.

- Core Course (CC) A-4 Papers-in First discipline - A(Home Science) of 6 Credit and 100 marks each
- Core Course (CC) B-4 Papers-in Second discipline -B of 6 Credit and 100 marks each

- Discipline Specific Elective (DSE)A - 2 Papers in (Discipline A e.g Home Science) of 6 Credit each and 100 Marks each
- Discipline Specific Elective (DSE)B - 2 Papers in (Discipline B): of 6 Credit each and 100 Marks each
- Skill Enhanced Course (SEC) - 4 Papers of 2 credits each
- Ability Enhanced Compulsory Course - 2 Papers of 2 credit each.
- English -2/MIL-2- 4 Papers
- Generic Elective - 2 papers of 6 credit each (From other Discipline)
- **Total 24 Papers with 120 Credit Points**

Course Structure for B.A/B. Sc (Regular) Home Science

Semester-I

Sl No	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-A1	Fundamentals of Food & Nutrition	Theory & Practical	4+2=6	60	75+25=100
2.	CC-B1	-	Theory	6	60	75+25=100
3	ENGL-1	-	Theory	6	60	100
4.	AEC-1	Environ Studies	Theory	2	20	50
		Total papers - 4	-	20	200	350

Semester-II

Sl No	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-A2	Child Development	Theory & Practical	4+2=6	60	75+25=100
2.	CC-B2	-	Theory	6	60	75+25=100
3	MIL-1	-	Theory	6	60	100
4.	AEC-2	Science & Technology	Theory	2	20	50
		Total papers - 4	-	20	200	350

Semester-III

SI No	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-A3	Textile & Clothing	Theory & Practical	4+2=6	60	75+25=100
2.	CC-B3	-	Theory	6	60	75+25=100
3	Engli-2	-	Theory	6	60	100
4.	SEC-1	Computer Applications	Theory	2	20	50
		Total papers - 4	-	20	200	350

Semester-IV

SI No	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	CC-A4	Family Resource Management	Theory & Practical	4+2=6	60	75+25=100
2.	CC-B4	-	Theory	6	60	75+25=100
3	MIL-2	-	Theory	6	60	100
4.	SEC-2	Office Management	Theory	2	20	50
		Total papers - 4	-	20	200	350

Semester-V

SI No	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	DSE-A1	Family and Women's Studies	Theory & Practical	4+2=6	60	75+25=100
2.	DSE-B1	-	Theory	6	60	75+25=100
3	GE -1	-	Theory	6	60	100
4.	SEC - 3	Entrepreneurship	Theory	2	20	50
		Total papers - 4	-	20	200	350

Semester-VI

SI No	Paper Code	Title of the Paper	Nature of the Paper	Credit Points	Contact Hours	Marks
1.	DSE-A2	Extension Communication and Development	Theory & Practical	4+2=6	60	75+25=100
2.	DSE-B2	-	Theory	4+2=6	60	75+25=100
3	GE - 2	-	Theory	6	60	100
4.	SEC- 4	Soft Skill Development	Theory	2	20	50
		Total papers - 4	-	20	200	350

DETAIL COURSE FOR HOME SCIENCE (Regular)

CC A1: Fundamentals of Food and Nutrition

Credit points - (Theory 04 + Practical 02) = 06

Learning Outcomes:

4. Understand the concept of nutritive constituents of food and food groups.
5. Gain knowledge about methods of cooking and its impact on nutritional quality of food.
6. Have fair idea of an adequate diet and importance of balance diet and planning.

UNIT-I

- **Introduction to Food, Nutrition, & Nutrients:** Definition of Food, Nutrients. Nutrition & malnutrition. Guide lines for good health.
- **Study of foods:** Importance classification and functions of food.

UNIT - II

- **Study of Nutritive Constituents of Food:**
 - ✓ Classification, function, sources, requirements & deficiency of proteins, fats and carbohydrates.
 - ✓ Classification of vitamins - Fat soluble vitamin and water soluble vitamin, functions, sources, deficiency, requirements of fat soluble vitamins A, D, B & K. and water soluble vitamins - B₁, B₂, Niacin, B₁₂ and vitamin C.
 - ✓ Functions, sources, deficiency and requirements of minerals - Calcium, Iron, Iodine.

UNIT - III

- **Food Groups** - Basic Food Groups (four, five and seven) and their nutritive contributions.
- **Menu Planning** - Meaning, Significance, Principles and factors affecting menu planning.
- **Balanced diet** - Meaning & Importance. Dietary guidelines for planning balanced diet for pre-school child, adolescent boys and girls, adult man woman of different work habit.

UNIT - IV

- **Methods of Cooking** -
 - ✓ Dry, moist, frying and microwave cooking
 - ✓ Advantages, disadvantages and the effect of various methods of cooking on foods
 - ✓ Nutrient losses in cooking and enhancing the nutritional quality of foods
- **Food Preservation** - Meaning, principle and importance of food preservation. Household methods of preservation (pickling, refrigeration, dehydration, pasteurization and use of chemical preservatives).

Practical:

Marks - 20 (Exam) + 5 (Record) = 25

4. Planning and preparation of balanced diet and calculation of nutritive value of various nutrients for the following groups - man and woman of different work habits, adolescent boys and girls (vegetarian and non-vegetarian).
5. Prepare at least one item from each methods of cooking (Boiling, steaming, stewing, shallow fat and deep fat frying, roasting, grilling and microwave cooking).

6. Preparation of pickles, sauce and squash from seasonally available fruits and/or vegetables at least one from each.

CC A2: Child Development

Credit points - (Theory 04 + Practical 02) = 06

Learning Outcomes:

4. To develop an understanding of the major concepts and process of child growth and development.
5. To have a fair knowledge regarding the developmental milestones up to years two years of age.
6. To develop sensitivity to the socio-cultural contexts of child behavior and development.

Unit - I

- Meaning, definition, principles and scope of Child development.
- Role of nature and nurture in Child growth and development.
- Developmental Milestones of Children – Meaning, significance and nature.

Unit - II

Developmental Milestones (First Five Years):

- Physical Development - Physical growth cycles, body size, body proportions, bones, muscles and fat, teeth, development of the nervous system.
- Motor Development – Meaning, principles and sequence of motor development.
- Speech Development – Meaning of speech, pre-speech forms of communication, essentials in learning to speak, major tasks in learning to speak, speech disorders.

Unit - III

- Emotional Development– Definition, Common emotional patterns and characteristics of children emotions.
- Social Development – Meaning, process and importance early social experiences. Factors influencing social development.

Unit - IV

- Play – Definition, values, characteristics and types of play. Selection of suitable play material and equipment for various age groups and their significance for child development.
- Childhood Interest – Meaning, types and significance in child's life.
- Role of family in child development.

Practical:

Marks – 20 (Exam) + 5 (Record) = 25

6. Prepare two different play materials for children out of waste materials having some educational value.
7. Prepare a poster showing different emotions of children (positive and negative).
8. Explain the role of nature and nurture through diagrammatical presentation.

9. Observing and recording physical and motor development of children from Zero to five years.
10. Conduct a test to assess the verbal ability (pronunciations and vocabulary) among three to five years children.

CC A3: Textile and Clothing

Credit points - (Theory 04 + Practical 02) = 06

Learning Objectives:

4. Acquaint with the different textiles and their performances.
5. Impart knowledge on different textile finishes.
6. To acquaint with proper notion regarding choice of fabrics.

Unit I

Introduction to textile fibres:

- ✓ Morphology of textile fibres
- ✓ Primary and secondary properties
- ✓ Fibre classification

Unit II

Production, chemistry, properties and usage of fibres:

- ✓ Natural fibre: Cotton, Flax, Silk and Wool
- ✓ Man-made fibers: Rayon, Polyamides, Polyester, Acrylic, Olefins (Polyethylene and Polypropylene) and elastomeric fibres

Unit III

Production and properties of Yarns:

- ✓ Yarn construction: Mechanical Spinning (Cotton system, Wool system, Worsted system) Chemical Spinning (Wet, Dry, Melt)
- ✓ Types of yarns: Staple and Filament, Simple yarns, Complex yarns
- ✓ Yarn Properties-Yarn Numbering, Yarn Twist
- ✓ Textured yarns: Types and properties
- ✓ Difference between Threads and Yarns
- ✓ Blends: Types of blends and purpose of blending

Unit - IV

- Socio-Psychological aspect of Clothing - Perception, Behavior, Choice, motivation, shopping behavior and satisfaction, age differences.
- Design in dress - personality, figure, the material, prevailing style, suitable decorations.
- Clothing for Infants: Factors considered during selection of infants clothing,-purchasing the layette (Gowns and wrappers, shirts, diapers, slips, sweaters, bibs, shoes, baby blankets, towels).

PRACTICAL:

Marks - 20 (Exam) + 5 (Record) = 25

5. Fibre Identification tests -Visual, burning, microscopic and chemical
6. Yarn Identification - Single, ply, cord, textured, elastic, monofilament,
7. Thread count and balance
8. Prepare an album of children's clothing for different occasions.

9. Report on the opinion of people on contemporary dresses and its level of comforts.

CC A4: Family Resource Management

Credit points - (Theory 04 + Practical 02) = 06

Learning Outcomes:

4. To create an awareness among students about management of family as well as other systems.
5. To recognize the importance of wise use of family resources in order to achieve family goals.
6. Develop understanding to the application of management in home.

Unit - I

- Home Management - Meaning, definitions and process of management - planning, organising, implementing, controlling and evaluating.
- Motivating Factors of Management - Values, goals, standards.
- Decision Making - Importance, steps and types of decision making. Qualities of a Good Home Maker.

Unit - II

- Family Resources - Meaning, Classifications (human and non-human), characteristics of resources.
- Management of Specific Family Resources -
 - c. Time Management - Time plan, steps in making time plan, controlling and evaluation of time, peak load periods. Rest periods and leisure time.
 - d. Energy Management - Fatigue - Its type of reduction. Work Simplification - Definition, techniques of work simplification, Mundel's classes of change.

Unit - III

- Money Management - Family income: Definition and types of income, various way of supplementing the family income. Family Expenditure: Budgeting - Definitions, steps in making family budget, factors affecting the budget making.
- Household Financial records - Nature, purpose and types of account keeping system.
- Savings and Investments - Meaning, objectives and need to save, types of savings, various saving deposit schemes and institutions, functioning of commercial banks, L.I.C., post office and other insurances.

Unit - IV

- Supplementary Family Income - Meaning, significance, types of supplementary family income for different socio-economic group family.
- Application of Management Process in - Event Planning & Execution within family and community set up.

Practical:

Marks - 20 (Exam) + 5 (Record) = 25

6. Preparation of time plans for self and family
7. Prepare a daily Time Plan for activities of a women executive/a school teacher.

8. Preparation of poster showing energy management in household activities through Fatigue reducing technique – a) Use of both hands to cover normal and maximum work areas, b) Keeping body balance, c) Comfortable work heights for correct posture.
9. Time and Motion Study
10. Event planning, management and evaluation-with reference to Managerial process and Resource optimization - time, money, products, space, human capital

DSE A1: Family and Women's Studies

Credit Points – Theory 6 + Practical 2 = 6

Unit – I

- Family - Meaning, Definition, Importance, Characteristics and Functions of Family.
- Types of Family - Joint and Nuclear Family: their characteristics, merits and demerits.
- Disintegration of Joint Family System in India – Meaning, causes and consequences.

Unit -II

- Family Life Cycles - Meaning, importance, stages of family life cycle (beginning, expanding, contracting, and contracting).
- Problems of Family Life – Marital disharmony, Accident, Prolonged illness, Dowry, Divorce, Family violence, Bereavement, Suicide, Economic distress, Drug and alcohol abuse.

Unit – III

- Women's role and Status in the society- Status and position of women in different ages and in the contemporary society.
- Significant role of women in the family and Community.
- Women as potential contributors in the modern family.

Unit – IV

- Woman Issues in India: gender discrimination –causes and consequences
- Exploitation of women at home and work place.
- Violence against women - types, causes & consequences.
- Ways to tackle women's issues.

Practical:

Marks – 20 (Exam) + 5 (Record) = 25

6. Prepare a poster showing the contemporary forms of families existing in India.
7. Record the newspaper clippings of marital and family problems/issues. Discuss the ways to resolve the problems.
8. Prepare a list the Family Developmental Tasks across Life Span and present it in poster form.
9. Discuss and discourse on issues faced by contemporary women in our society
10. Collect data from women belonging to various categories regarding the problems they face in different phase of their life.

DSE A2: Extension Communication and Development

Credit points - (Theory 04 +practical 02) = 06

Learning Outcomes:

4. Understand the widening concept of extension education among the rural mass.
5. Develop skills to be an effective extension worker.
6. Aware of the prevailing conditions and status of people in the community with special reference to poverty, gender and environment.

Unit - I

- Meaning, philosophy, objectives and principles of Home Science Extension Education. Principles of Extension work in the Rural areas.
- Communication - Meaning, definitions and types of communication. Importance of Communication in Extension Work. Functions and barriers of Communication.
- Elements of communication. Models of communication-Aristotle, lasswell, sharron and weaver, schramm, Berlo, Legan, Roger's & shoe maker's models of communication.

Unit - II

- Extension Education - Definition & Types of Education. Definition, Types, scope needs objectives, philosophy& principles of extension education. Behavioral changes brought about by extension education.
- Extension Teaching Methods - Individual (home visits, telephone calls, personal letters). Group Methods (lecture, method demonstration, field trip, seminars, workshop, group discussion, conferences). Mass method (Surveys, Newspaper, leaflets).
- Use of Audiovisual Aids - Meaning and definitions, their use in extension education, advantages and disadvantages. Types - Radio, recordings, posters, charts, bulletin board, flash cards, puppets of different types, television, and films.

Unit - III

- Teaching-Learning process - Meaning. Principles & steps in extension teaching Criteria for effective extension teaching. Elements of a learning situation. Criteria for effective learning. Principles of learning as applicable to extension.
- Diffusion and adaption- Attributes of innovation, concept and elements of diffusion. Adaption - Characteristics, stages and factors associated with adaption. Sources of information.

Unit - IV

- Community Development - Definitions, objectives and principles of Community development in India. Areas of Community Development.
- Role of Community Development workers.
- Role of Home Science Education in Community Development - Role of ICDS, MahilaMandal, Self-Help Groups, NGO's, Panchayat Raj and Mission Shakti in Community Development.

Practical:**Marks - 20 (Exam) + 5 (Record) = 25**

6. Preparations of leaflets, chart and puppet on any topic related to Home Science.
7. Writing of short story which gives some message to the community regarding best practices on community health, nutrition and development.
8. Preparation of immunization card up to 5 years old child.
9. Preparation of tools for conducting base line survey of villages, identifying needs of selected families and compilation of information.
10. Conduct household surveys and organising group demonstrations.

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Generic Elective (GE) - 1: Food Nutrition & Human Physiology

Credit points - Theory =06

Learning Outcomes:

1. Understand the concept of nutritive constituents of food and food groups.

2. Gain knowledge about methods of cooking and its impact on nutritional quality of food.
3. Understand the physiology of human body.
4. To provide information about the functioning of different system in the human body.

Unit - I

- Introduction to Food, Nutrition, & Nutrients: Definition of Food, Nutrients. Nutrition & malnutrition. Guide lines for good health.
- Study of foods: Importance classification and functions of food.

Unit - II

- Study of Nutritive Constituents of Food:
 - ✓ Classification, function, sources, requirements & deficiency of proteins, fats and carbohydrates.
 - ✓ Classification of vitamins – Fat soluble vitamin and water soluble vitamin, functions, sources, deficiency, requirements of fat soluble vitamins A, D, B & K. and water soluble vitamins – B₁, B₂, Niacin, B₁₂ and vitamin C.
 - ✓ Functions, sources, deficiency and requirements of minerals - Calcium, Iron, Iodine.

Unit - III

- Food Groups - Basic Food Groups (four, five and seven) and their nutritive contributions.
- Menu Planning – Meaning, Significance, Principles and factors affecting menu planning.
- Balanced diet – Meaning & Importance. Dietary guidelines for planning balanced diet for pre-school child, adolescent boys and girls, adult man woman of different work habit.

Unit - IV

- Human Cell: Its structure and functions, cell division.
- The Respiratory System: Structure and functions of lungs, mechanism of respiration, external and internal respiration, vital capacity, and other volumes.
- Blood: Composition, Structure and Functions of RBC, WBC, Blood Platelets, Blood Groups and Rh factor.
- The Cardiovascular System: structure of arteries, veins and capillaries, structure of the Heart, Cardiac cycle, Blood Circulation - Pulmonary, Coronary, Portal, Systemic Circulation.

OR

GE -1: Community Health and Nutrition

Credit points - (Theory) = 06

Learning Outcomes:

1. To understand the concept of community health & Health for all.
2. To appreciate the various Methods of cooking, nutritional Status and supplementary nutrition programmes.
3. To be able to assess the nutritional status.
4. To be able to know about National & International Nutritional Agencies.

Unit - I

- Concepts of Community Health and Nutrition – Definition and meaning of community health.
- Components of Health – Physical health, mental health social health and spiritual health.
- Determinants of health – Heredity, Environment, lifestyle, economic status, provision of health Services Community Nutrition -Meaning, significance and scope of community Nutrition.

Unit - II

- Introduction to Food, Nutrition, & Nutrients: Definition of Food, Nutrients. Nutrition & malnutrition. Guide lines for good health.
- Study of foods: Importance classification and functions of food.
- Study of Nutritive Constituents of Food:
 - ✓ Classification, function, sources, requirements & deficiency of proteins, fats and carbohydrates.
 - ✓ Classification of vitamins – Fat soluble vitamin and water soluble vitamin, functions, sources, deficiency, requirements of fat soluble vitamins A, D, B & K. and water soluble vitamins – B₁, B₂. Niacin, B₁₂ and vitamin C.
 - ✓ Functions, sources, deficiency and requirements of minerals - Calcium, Iron, Iodine.

Unit - III

- Common Nutritional Problems in India – Low Birth weight, Protein–energy malnutrition, Vitamin A deficiency, Nutritional anemia, Iodine deficiency disorders.
- Assessing Nutritional Status – Objectives and importance
- Methods of assessment -
 - a. Direct - Clinical signs, nutritional anthropometry, biochemical tests, biophysical tests.
 - b. Indirect - Diet surveys, vital statistics

Unit - IV

- Nutrition Education - Meaning, objectives, principles& importance of nutrition education for community health in India.
- Supplementary Nutrition Programme – Objectives of Nutrition Programme, Programmes to control Malnutrition – Integrated Child Development Services (ICDS), Public Distribution System (PDS), Annapurna Scheme, National food for work programme , Antyodaya Anna Yojana (AAY)

Generic Elective (GE) - 2: Child Development & Home Management

Credit points - Theory =06

Learning Outcomes:

1. To develop an understanding of the major concepts and process of child growth and development.
2. To have a fair knowledge regarding the developmental milestones up to years two years of age.
3. To recognize the importance of wise use of family resources in order to achieve family goals.

4. Develop understanding to the application of management in home.

Unit - I

- Meaning, definition and principles and Child development.
- Prenatal Growth & Development: Meaning, importance and Stages - Conception, period of ovum, period of embryo and period of foetus.
- Prenatal Environmental Influences: Maternal age, nutrition, drugs irradiation, alcohol, smoking, maternal emotions, maternal health, Rh factor, diseases and birth hazards.

Unit - II

- Developmental Millstones up to 2 years of Age:
- Physical Development - Physical growth cycles, body size, body proportions, bones, muscles, fat and teeth.
- Motor Development - Meaning, principles and sequence of motor development.

Unit - III

- Speech Development - Meaning of speech, pre-speech forms of communication, essentials in learning to speak, major tasks in learning to speak, speech disorders.
- Social Development - Meaning, process and importance early social experiences. Factors influencing social development.
- Play - Definition, values, characteristics and types of play. Selection of suitable play material and equipments for various age groups and their significance for child development.

Unit - IV

- Home Management - Meaning, definitions and process of management - planning, organising, implementing, controlling and evaluating.
- Decision Making - Importance, steps and types of decision making.
- Family Resources - Meaning, Classifications (human and non-human), characteristics of resources.
- Management of specific Family Resources: Time management, Energy management and money Management.
- Selection of site - Factors to consider at the time of selection of site. Kitchen planning and types.
- Interior decoration - Meaning and objectives. Element of beauty and design - line, space, pattern, light, colour, texture.

OR

GE - 2: Child Development and Family Studies

Credit points Theory =6

Unit - I

- Meaning, definition and principles and Child development.

- Prenatal Growth & Development: Meaning, importance and Stages - Conception, period of ovum, period of embryo and period of foetus.
- Prenatal Environmental Influences: Maternal age, nutrition, drugs irradiation, alcohol, smoking, maternal emotions, maternal health, Rh factor, diseases and birth hazards.

Unit - II

- Developmental Millstones up to 2 years of Age:
- Physical Development - Physical growth cycles, body size, body proportions, bones, muscles, fat and teeth.
- Motor Development - Meaning, principles and sequence of motor development.

Unit - III

- Speech Development - Meaning of speech, pre-speech forms of communication, essentials in learning to speak, major tasks in learning to speak, speech disorders.
- Social Development - Meaning, process and importance early social experiences. Factors influencing social development.
- Play - Definition, values, characteristics and types of play. Selection of suitable play material and equipments for various age groups and their significance for child development.

Unit - IV

- Family - Meaning, Definition, Importance, Characteristics and Functions of Family.
- Types of Family - Joint and Nuclear Family: their characteristics, merits and demerits.
- Disintegration of Joint Family System in India - Meaning, causes and consequences.

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