Smt.VHD Central Institute of Home Science  
Seshadri Road, Bangalore-560 001

Smt.VHD Central Institute of Home Science, Bangalore is one of the premier women’s Colleges in Karnataka, affiliated to Bangalore University and is a Government College. The Home Science Department was founded in 1951 and in 1961 Smt. VHD Central Institute of Home Science came into existence, as an answer to the increasing demands for higher education among young women.

Home Science is a scientifically planned interdisciplinary field of study with its mission to empower girl students. Home Science deals with various aspects of daily living encompassing consumer science, nutrition, parenting, human development, interior decoration, family economics, clothing and textiles, resource management and counselling.

Home Scientists are equipped with knowledge to face new challenges, cope with knowledge explosion, technological advancements, new developments and growing needs of individuals at both national and global scenario.

The Institute trains its graduates towards a meaningful career in diverse sectors such as hospitals, Welfare Departments, Education, Banking, Industries, Media and Communication, Health Department etc. It also provides a platform for self-employment in diverse fields to meet the present day needs at the National and global level.

The Institute offers Home Science subjects at the Pre University level in various combinations along with other science and art subjects.

At the Undergraduate level, under the choice based credit system (CBCS) students can opt for pure Home Science studying Human Development, Early Childhood Education and Administration, Resource Management, Textiles & Clothing, Extension Education &Communication and Food &Nutrition. Students also have the option to obtain their under graduate degree in Clinical Nutrition & Dietetics and Fashion And Apparel Design. They can also opt for Home Science as one of the optional subjects, either with pure science or art subjects.

At the Post Graduate level students can further specialise in any discipline of Home Science ie Human Development, Early childhood Education and Administration, Resource Management, Textiles & Clothing, Extension Education &Communication, Food &Nutrition and Clinical Nutrition and Dietetics.

Students interested in pursuing research, can progress to Doctoral studies in any one of the six disciplines of Home Science as the Institution is a recognised research centre by the Bangalore University.

Prof.O.Obaiah, who has a teaching experience of 36 years, is currently leading the college with his able administration.
Courses offered under the B.Sc stream and subjects studied each semester:

**B.Sc Composite Home Science**

**I, II, III, IV Semester**

**Optional I (HD & EEC)**
Human Development and Extension Education and Communication

**Optional II (RM & TC)**
Resource Management and Textiles & Clothing

**Optional –III (FN & ECEA)**
Food & Nutrition and Early Childhood Education and Administration

**V, VI Semester**
Students can opt for any three of the following papers:

- Human Development
- Early childhood Education and Administration
- Resource Management
- Textiles and Clothing
- Food and Nutrition
- Extension Education and Communication

**Post Graduate program in Home Science**
A student can opt for any one of the papers taken up in the V and VI semester and go on to obtain a Master Degree in that subject.

**B.Sc Clinical Nutrition and Dietetics**

Scheme of study has been drawn up by the Food and Nutrition Department. Students will only study Nutrition and Dietetics papers and other papers related to the subject.

**B.Sc Fashion and Apparel Design**

Scheme of study has been drawn up by the FAD board of studies. Students will only study Fashion and Apparel design papers and other papers related to the subject.

**B.Sc/BA Home Science as one optional**

**Optional 1- Home Science**

**Semester-I (HD & ECEA)**
Human Development and Early Childhood Education and Administration
Semester-II (RM & TC)
Resource Management and Textiles and Clothing

Semester-III (FN & EEC)
Food and Nutrition and Extension Education and Communication

Semester-IV (ED)
Entrepreneurship Development

Semester V, VI
B.Sc. Home Science as one optional students can opt for any one of the following papers and continue the same paper in the VI semester
- Human Development
- Early childhood Education and Administration
- Resource Management
- Textiles and Clothing
- Food and Nutrition
- Extension Education and Communication

B.A Home Science as one optional student can opt for any one of the following papers and continue the same paper in the VI Semester
- Human Development
- Early childhood Education and Administration
- Resource Management
- Extension Education and Communication

Note: BA students are not eligible to take up Food and Nutrition or Textiles and Clothing papers as they have not studied chemistry in the previous semesters.

Post Graduate program in Home Science
A student can opt for any one of the papers taken up in the V and VI semester and go on to obtain a Master Degree in that subject.
A) I Semester of the Post Graduate Program in Human Development or Early childhood education & Administration or Resource Management or Textiles & Clothing or Food & Nutrition or Extension Education and Communication

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B) II semester of the Post Graduate Program in Human Development or Early childhood education & Administration or Resource Management or Textiles & Clothing or Food & Nutrition or Extension Education and Communication

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*There may be one or two practical work in lieu of the Project work.
C) III Semester of the Post Graduate Program in Human Development or Early childhood education & Administration or Resource Management or Textiles & Clothing or Food & Nutrition or Extension Education and Communication

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Total Credits per Semester per program: 24

D) IV Semester of the Post Graduate Program in Human Development or Early childhood education & Administration or Resource Management or Textiles & Clothing or Food & Nutrition or Extension Education and Communication

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Total Credits per Semester per program: 24

*There may be one or two practicals in lieu of the Project work.
2 Years Post Graduate Program in Home science
2014-2015

Department of Human Development
## I semester of Post Graduate Programme in Human Development

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| Total Credits per Semester | 26 |
| Foundation Course Credits | 08 |

*Non-Home Science background students are required to complete a foundation course in the first semester along with regular courses of the first semester. However, this does not apply to students who have studied psychology, sociology, women studies, genetics as one of the optional subject at the undergraduate level.
II semester of Post Graduate Programme in Human Development

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Total Credits per Semester 26
OBJECTIVES:

To enable the students

- To understand the field of Human Development and significance of Human Development.
- To understand childhood years, adolescence and adulthood

Unit-1  Importance of Human Development  8 Hours

- Meaning, Definition, scope of Human Development,
- Growth and development and Principles of development
- Stages, Developmental tasks across life span

Unit-2  Prenatal Development  10 Hours

- Reproductive organs, menstrual cycle,
- Conception, symptoms, discomforts and complications of pregnancy.
- Prenatal stages, Antenatal care of mother
- Stages of child birth

Unit-3  Neonate and Infancy  10 Hours

- Physical characteristics, sensory capacities, reflexes, adjustments and assessment.
- Importance of breast feeding
- Developmental milestones.
- Physical and motor development, factors contributing to development- feeding, nutrition, immunization, hygiene.

Unit-4  Childhood and Adolescence  12 Hours

- Developmental milestones, physical, social, emotional, cognitive and language development of early and late childhood
- Adolescence: Definition, characteristics, developmental milestones, Physical changes; male and female body clock, sequence of change, body image; social, emotional, cognitive and moral development.
Unit- 5 Adulthood

- Meaning, characteristics ,
- physical, social, cognitive and emotional development during early, middle and late adulthood.

PRACTICALS

HSHD-FC-P

Total marks:50
No. of weeks:13
Hrs per week:4
Internal Assessment -15
Practical Exam:35

1. Develop an album of stages of Human Development.
2. Using a developmental milestone checklist observe/interview and report the development of infant/preschool child/school child.
3. Interview any two adolescents about the physical growth and changes experienced during puberty and report the same.
4. Organize a lecture on: menopause/stressors/in middle age/adjustment in middle age and report the same.
5. Visit an old age home and write a report.

REFERENCES:

OBJECTIVES:
To enable students to:

- Understand the need for theory in Human Development.
- Develop a critical appraisal of the important theoretical models in the field of Human Development.
- To develop insight into the concepts implied by the theories to understand the research in the area of behaviour and development.
- Critically evaluate the cross-cultural applicability of theory.

Unit-1  Theoretical models  6 Hours
Need, importance, characteristics of a good theory.
Different types of theoretical approaches.

Unit-2  Psycho Dynamic theories- cross-cultural relevance and implications.  10 Hours
- Erik Erikson’s Psycho- social theory.
- Sigmund Freud’s Psycho sexual theory and Neo Freudians

Unit-3  Theories of Behavioral Learning- cross cultural relevance and implications.  14 Hours
- Thorndike’s Trial and Error learning theory.
- Ivan Pavlov’s Classical Conditioning theory.
- B.F. Skinner’s Operant Conditioning theory.
- Bandura’s Social learning theory.

Unit-4  Theories of development- cross cultural relevance and implications.  10 Hours
- Abraham Maslow’s theory of Hierarchy of needs.
- Jean Piaget’s Cognitive Development theory.
- Howard Gardner’s theory of multiple intelligence.
- Kohlberg’s theory of Moral Development.
- Bowlby’s theory of Attachment.

Unit-5  Theoretical perspectives on aging  12 Hours
- Theories of biological aging – Heredity theory.
- Cellular aging theory, Wear and Tear theory.
- Clinker theory, auto-immunity theory.

PRACTICALS

HSHD-101-P
No. of weeks:13
Hrs per week:4

Total marks:50
Internal Assessment :15
Practical Exam:35

1. Conduct an experiment on any 3 cognitive abilities of preschool children as identified by Piaget (seriation, conservation, classification, transitivity)
2. Conduct a workshop on multiple intelligence for enhancing learning activities among children
3. Develop a checklist for parents to elicit information on the influence of electronic media on social learning through modelling
4. Conduct a study to find the implications of parental employment on the attachment of children

REFERENCES:


OBJECTIVES
To enable students to:

➢ To understand the influence of heredity and environment
➢ Understand the changes from conception to birth.
➢ Understand the development during infancy.

CONTENTS
Unit 1 Pre-natal development 10 Hours

• Biological foundations: DNA, Genes, Chromosomes, Spermatogenesis, oogenesis.
• Influence of heredity and environment, types of inheritance.
• Conception, signs and symptoms of pregnancy.
• Periods of development, major complications during pregnancy.
• Prenatal care: Risk factors associated with prenatal period- teratogens, Environment (Radiation, chemicals, and other hazards in the environment), toxoplasmosis, Mother’s age, Nutrition, Infections and Maternal
• Diseases, Drugs, Tobacco, Alcohol, Poverty, Maternal health and care.
• Emotional state of pregnant woman, importance of mother’s emotional well-being on the child.

Unit 2 Neonate 8 Hours

• Physical characteristics, sensory capacities, reflexes, adjustments and assessment.
• Importance of breast feeding
• Health and care of newborn.

Unit 3 Infancy 12 Hours

• Developmental milestones, need for early stimulation.
• Physical and motor development, factors contributing to development- feeding, nutrition, immunization, hygiene, prevention of diseases and health care.
Unit 4  Cognitive and language development  
- Piagetian and Vygotskian perspectives.
- Milestones of Language development, pre-linguistic, phonological, semantics, grammatical, and pragmatic development.
- Determinants of language acquisition

Unit 5  Emotional and social development:  
- Attachments.
- Development of emotions: Components, functions,
- Milestones.
- Cultural influences.
- Development of self, autonomy, self-concept.

PRACTICALS

HSHD-102-P  
No. of weeks: 13  
Hrs per week: 4

Total marks: 50
Internal Assessment - 15  
Practical Exam: 35

1. Organize a lecture on importance of prenatal care and report the same.
2. Compile related literature on risk factors associated with pregnancy. Discuss the same.
3. Trace the developmental milestones during infancy and present the same.
4. Conduct a study on child rearing practices in a particular culture.

REFERENCES

SEMESTER-I
Human Development

Paper III
EARLY CHILDHOOD CURRICULUM

Code: HSHD-103
Total marks: 100
Hours: 52
Theory: 70
Instruction hrs/week: 4
Internal Assessment: 30

OBJECTIVES:

To enable students to:

- Understand the purpose, rationale and guiding philosophical principles of the curriculum
- Understand the development of the curriculum guide for early childhood years
- Plan, prepare and implementation of activities and programs.

CONTENTS

Unit-1 Introduction to the Early Childhood Curriculum 8 Hours
- Purpose, Definition, Rationale
  - The learning environment
  - Role of teachers, parents and community

Unit-2 The Guiding Principles of Curriculum 12 Hours
- Learning Through Play
- Sequenced Learning
- Individual Learning
- The Practitioner’s Multiple Roles
- Inclusion of All Children
- Integrated Curriculum

Domains of Development Skills
- Affective domain (personal, social-emotional skills)
- Skills in the creative/expressive domain (the aesthetic skills)
- Skills in the cognitive domain (intellectual, language & literacy skills)
- Skills in the psychomotor domain (physical/motor skills)
- Integrated learning for infants, toddlers and preschoolers
- Thematic curriculum content

Unit-3 The Early Years Curriculum 12 Hours
- Language and Literacy
- Numeracy Skills
- Environmental Awareness
Aesthetics, Creative Expression and Appreciation of the Arts:
Art and Craft
Music, Movement and Drama
Self and Social Development(including Health Awareness)
Perceptual, Fine and Gross Motor Skills Development

Unit-4 12 Hours

Program planning: need importance and types
Learning Outcomes for Young Children

- Wellness
- Effective communication Valuing culture
- Intellectual empowerment
- Respect for self, others and the environment
- Resilience

Unit-5 Curriculum approaches 8 Hours

Child centered, knowledge centered, teacher centered, heuristic, Reigo-Emila curriculum, Waldorf curriculum

PRACTICALS

HSHD-103-P Total marks:50
No. of weeks:13 Internal Assessment -15
Hrs per week:4 Practical Exam:35

1. Visit to various ECE centers. Develop a checklist to compare and contrast on the type of curriculum followed and write a report.

2. Design an appropriate low cost and environment friendly learning materials for:
   - Story telling
   - Readiness
   - Art and craft
   - Rhyme booklets
   - Language and Literacy
   - Numeracy Skills

3. Theme based weekly programme- plan a curriculum and execute for preschool school children.

4. Organise a workshop/exhibition for parents of pre-school children
REFERENCES:


SEMESTER-I
Human Development

Paper IV
CHILDREN WITH SPECIAL NEEDS

Code:HSHD-104
Total marks:100
Hours:52
Theory:70
Instruction hrs/week:4
Internal Assessment:30

OBJECTIVES

To enable the students to:

- Understand the challenges and needs of children with special needs.
- Understand the need and importance of identification, screening and assessment
- To understand the importance of special and inclusive education
Unit 1  Introduction to children with special needs – meaning, definition, classification. Role of support system. Concept of special, inclusive and home based education.  

06 Hours

Unit 2  Children with slow learning and learning disability, Intellectual disability and gifted children - Definition, causes, classification, characteristics, prevalence, identification, screening, assessment, need for early intervention and rehabilitation. 

Importance of functional skills – daily living, self-help, and social skills.  

10 Hours

Unit 2  Children with Physical, Neurological, Orthopedically and Sensory Impairments - Definition, causes, classification, characteristics, prevalence, identification, screening, assessment and need for early intervention. Importance of functional skills – daily living, self-help, and social skills.  

12 Hours

Unit 3  Children with Emotional and Behavioral disorders - Definition, causes, classification, characteristics, prevalence, identification, screening, assessment and need for early intervention. Importance of functional skills – daily living, self-help, and social skills.  

14 Hours

Unit 5  Children with Multiple disabilities - Definition, causes, classification, characteristics, prevalence, identification, screening, assessment and need for early intervention. Importance of functional skills – daily living, self-help, and social skills.  

10 Hours

PRACTICALS

HSHD-104-P  Total marks:50
No. of weeks:13  Internal Assessment -15
Hrs per week:4  Practical Exam:35

1. Orienting students to special schools catering to the educational needs of children with intellectual/ physical/sensorial/ emotional/behavioural and multiple disabilities in Bangalore city.
2. Orienting students to inclusive schools catering to the educational needs of children with intellectual/ physical/sensorial/ emotional/behavioural and multiple disabilities in Bangalore city.
3. Organize a panel discussion on children with multiple disabilities.
4. To interact with parents and teachers teaching children with physical/sensorial/emotional/behavioural and multiple disability on the functional skills. Report the same.
REFERENCES:


SEMESTER-I
Human Development

Paper V
SOFT CORE-PARENT AND COMMUNITY EDUCATION

Code:HSHD- 105
Total marks:100
Hours:48
Theory:70
Instruction hrs/week:3
Internal Assessment:30

OBJECTIVES

To enable the students to:

- Understand the need and importance of parent education
- Get acquainted to the concept of community education
- Understand the techniques of imparting parent education programme.

Unit 1 Parent education –Need, aspects, types of parent education.  8 Hours
Parents as stake holders, planners, advisers, volunteers, and resource persons.

Unit 2 Community education – Fundamental principles of community.  12 Hours
Community education with reference to health, education, and nutrition for children, needs and rights of children, child rearing and disciplinary techniques, socialization and parental beliefs in various socio-cultural settings.

Unit 3 Techniques of Parent and community Education- Informal meeting, group and individual meetings, Use of audio visual aids.  12 Hours
Parent and toy library, Parent's corner and workshop/ demonstration centers, Open house, Written and printed materials

Unit 4 Organizing parent and community programmes – school, community centers, recreation centers, youth clubs and other NGO’s.  8 Hours
Unit 5  Role of professional - contribution of professionals in parent and community education.

Training programmes for young parents.

Evaluation of parent and community education programmes

REFERENCES:


Semester-II
Human Development

Paper I
RESEARCH METHODOLOGY

Code:HSHD- 201
Total marks:100
Hours:52
Theory:70
Instruction hrs/week:4
Internal Assessment:30

OBJECTIVES
To enable students to:

- Understand the significance of research methodology in human development research
- Understand the types, tools and methods of research and develop the ability to construct data gathering information
- Develop competence in report writing

Unit-1  Introduction to research;

Concept, significance, research ethics.

The research process: research planning, review of literature, research problem, research questions, hypothesis, research objectives, Research proposal/Research design: Need, structure, classification, characteristics, formulation.
Unit-2  Tools for data collection-  
Construction of schedules and questionnaire, measurement scale, pilot study, validity and reliability  
10 Hours

Unit-3  Types and methods of research: Qualitative and Quantitative methods  
sources of data - primary, secondary and tertiary sources  
10 Hours

Unit-4  Sampling techniques:  
Probability and non-probability sampling.  
8 Hours

Unit-5  Research proposal-need, importance and steps in writing research proposal  
12 Hours

REFERENCES:


Semester-II  
Human Development

Paper II  
DEVELOPMENT IN SCHOOL YEARS

Code: HSHD-202  
Total marks: 100
Hours: 52  
Theory: 70
Instruction hrs/week: 4  
Internal Assessment: 30

OBJECTIVES:

To enable students to

- Understand the changes in all the domains of development during school years
- To gain an insight into the need for guidance and counseling during school years
Unit 1  Physical and Motor Development  10 Hours
- Changes in body size and proportion
- Motor skills
- Factors influencing physical and motor development

Unit 2  Cognitive and Language Development  10 Hours
- Cognitive Development -Major changes in cognition, cognitive capacities, skills, Piaget’s and Vygotsky’s perspectives, factors influencing cognitive development
- Language development-major changes, factors influencing language development

Unit 3  Socio-emotional and Moral Development  12 Hours
- Socio-emotional Development-Common emotional patterns, emotional expressions and understanding of emotions, need for autonomy, social cognition and perspective taking, role of peers, siblings, school and parents, common play patterns and interests, factors contributing to socio-emotional development
- Moral Development- moral behavior, thought and reasoning, development of moral conscience, factors contributing to moral development

Unit 4  Personality Development  10 Hours
- Development of self-awareness, self understanding, self-esteem, self-concept. Factors contributing to personality development

Unit 5  Parent Child Relationship  12 Hours
- Parent Child Relationship
- Common childhood problems
- Need for guidance and counseling
- Role of parents and professionals

PRACTICALS

HSHD-202-P
No. of weeks:13
Hrs per week:4

Total marks:50
Internal Assessment -15
Practical Exam:35

1. Develop an educational aid/ activity to foster cognitive/ language/ socio-emotional development during school years
2. Conduct a study on play patterns/ interests/ problems/ parent-child relations during school age
3. Organize a programme to sensitize the school age children on the need of guidance and counseling.
4. Organize an education programme for the parents of school age children.
REFERENCES

8. Sujatha Mittal, (2005), Children and Media, Rajdhani Printers, New Delhi,

Semester-II
Human Development

Paper III
ADOLESCENCE AND YOUTH

Code:HSHD- 203
Total marks:100
Hours:52
Theory:70
Instruction hrs/week;4
Internal Assessment:30

OBJECTIVES:

- To enable the students to understand the physical and psychological developmental processes that occur during adolescence
- To make the learners understand the cognitive development during adolescence and youth.
- To enable the students understand reproductive and mental health issues related to adolescents and youths.

Unit-1  Physical and growth and change-Male and Female body clock, sequence of change, Body image.  10 Hours

Unit-2  Cognitive development–Piaget and Vygotsky’s perspectives. Information processing view-cognitive resources, mechanisms of change, attention and memory, critical thinking , reflective judgment, moral reasoning and judgment, social cognition  12 Hours
Unit-3  Social development: Determinants of adolescent social development – family, peers, school and college, media, culture.

Social skill development-Empathy, Effective, Communication, assertiveness.

Unit-4  Health problems and related behaviors- Determinants of Adolescent health problems, Risk behavior and emotional health issues- Depression, Anxiety, substance abuse, smoking and alcohol addiction , teenage pregnancy, Reproductive health issues.

Unit-5  Emotional development-Components of emotions, Emotional Intelligence. Mental health of adolescents and youths- Issues and concerns, Positive mental attitude, Counseling needs, Academic concerns, Vocational and Career guidance.

PRACTICALS

HSHD-203-P  Total marks:50
No. of weeks:13  Internal Assessment -15
Hrs per week:4  Practical Exam:35

1. Interview any two adolescents about the physical growth and changes experienced during puberty and report the same.

2. Design an educational aid to educate adolescents about a selected issue related to adolescents reproductive health/health problems.

3. Visit and report about an organization working in the field of adolescent mental health

4. Organize a workshop to facilitate social skill development of adolescents.

REFERENCES:

OBJECTIVES:

- To identify forms of media and comprehend their role in the lives of children and adolescents.
- To critique the content, understand its relation to and impact on children and adolescents.
- To critically understand the portrayal of children in media.

Unit 1  Different forms of media with reference to children  8 Hours
• Definition and different forms of media (folk, print, electronic)
• Specific characteristics and functions of each form of media.
• Use of radio, television and print media for benefit of children.
• Impact of media contents on children.

Unit 2  Children in media  10 Hours
• Depiction of children in media.
• Critical review of using children in media settings in relation to age appropriateness, social significance, stereotypes.
• Enhancing awareness, sensitivity and appropriate care while involving children in media.
• Awareness and understanding of influence of the culture of media on growth and development of child participants.

Unit 3  Media and Adolescents  10 Hours
• Role of media in the lives of adolescent with special reference to use of internet (social networking sites, e-mail browsing).
• Careers in the field of media
• Media literacy for family, school and children.

Unit 4  Special features for creating content for children’s media  12 Hours
• Children’s perception as viewers.
• Importance of educational objectives in media, Balancing education with entertainment.
• Listening to children and importance of feedback.
• Protecting children’s feelings, emotions and privacy in the world of media.
Unit 5  
Electronic media (internet, multimedia, electronic games) and its significance in a changing world.  

8 Hours

REFERENCES:


Semester-II  
Human Development

Paper V  
SOFT CORE-LIFE SKILLS EDUCATION

Code: HSHD-205  
Total marks:100
Hours:48  
Theory:70
Instruction hrs/week;3  
Internal Assessment:30

OBJECTIVES:

To enable students to:

- Understand and enhance life skills
- Develop knowledge, understanding and skills in the management of issues related to personal growth and development
- Gain knowledge and understanding in order to make informed health and lifestyle decisions
- Develop skills, and responsible values and attitudes, that enhance the quality of interpersonal relationships
CONTENTS

Unit-1  Life skills-meaning, definition, importance, WHO life skills
Life skills education-meaning, definition importance and goals 8 Hours

Unit-2  Three basic categories of life skills - 12 Hours
- Social or interpersonal skills (Communication Skills, Assertiveness Skills, Cooperation Skills, Empathy)
- Cognitive or thinking skills (Problem Solving, Critical Thinking, Creative Thinking, Decision Making, Self Awareness)
- Emotional skills (Managing Stress, Managing Emotions, Resisting peer pressure)

Unit-3  Communication skills- 10 Hours
Meaning definition, types, components, levels of communication types of communication, barriers to communication, communication noise, ways to improve interpersonal communication, public speaking, interview facing

Unit-4  Conflict resolution- 8 Hours
Understanding conflict in relationships, conflicts arise from differing needs, causes of conflict, steps for managing and resolving conflict, stages of healthy conflict resolution, the five styles of conflict resolution, styles of dealing with conflict

Unit-5  Career guidance: 10 Hours

REFERENCES:

http://www.cbseacademic.in/web_material/Lifeskills/1_Life%20Skills%20Class%20VI.pdf
Government of Karnataka
Department of Collegiate Education

Smt. VHD Central Institute of Home Science
Seshadri Road, Bangalore 560 001

2 Years Post Graduate Program in Home science
2014-2015

Department of Resource Management
### I semester of Post Graduate Programme in Resource Management

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**Note:** Non Home Science Candidates will have to complete foundation course as per Departmental norms.
### II semester of Post Graduate Programme in Resource Management

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**Total credits per semester** 26
OBJECTIVES:
To help students
➢ to understand the concept of income management.
➢ To familiarize students to the role of saving and credit in financial management
➢ To improve knowledge of insurance and investment.
➢ To provide an insight into consumer problems and protections.

Unit-1 10 Hours
Concept of Income - Objectives of personal finance, income management, budget planning and account keeping.
Types of Income –Relationship of GNP – National Income, Personal Income, Disposable Income, Supplementing Family Income

Unit-2 12 Hours
Savings and Credit – need for saving institute – bank, post office, UTI and life insurance. Credit – source, types, credit instruments, use and abuse of credit, cost of credit, credit and debit cards.

Unit-3 10 Hours
Insurance– definition, needs and principles of insurances. Types of insurance- life, health and motor

Unit-4 10 Hours
INVESTMENT: Principles of investments, types of investments- shares, debentures, bonds and mutual funds.

Unit-5 10 Hours
Introduction to Taxation: Needs for tax, cannons of taxation, Direct and Indirect tax, merits and demerits, VAT.

PRACTICAL
Code: HSRM 101-P Total Marks: 50
No. of Weeks: 13 IA: 15
Hrs per week: 4 Practical Exam: 35

1. Study on income and expenditure pattern
2. Visit to saving institute and banking process
3. Calculation of cost of credit, use of plastic money
4. Project on Supplementing Income
5. Calculate Income Tax to a Given Income
REFERENCE:


Semester I
Resource Management

Paper II
ERGONOMICS – 1

Code: HSRM –102  Total Marks: 100
Hours: 52  Theory: 70
Instruction Hrs/Week: 04  Internal Assessment: 30

Objectives:

➢ To understand the role of ergonomics in work effectiveness and efficiency.
➢ To understand the environmental factors contributing to productivity, safety, control and well-being of individual performing the work.

UNIT I:  Ergonomics:  8 Hours
Definition, objectives, scope, domains of ergonomics - Man, machine and Environment.

UNIT II:  Management of energy  12 Hours
Energy, sources of Energy-carbohydrates, proteins, fats ATP and CP, Energy Expenditure-methods of estimating energy, factors affecting energy expenditure steps in energy management processes,

Unit III:  10 Hours
Fatigue - definition, types, measures to overcome fatigue, work simplification techniques, Principles of motion economy and Principles of body mechanics,

UNIT IV:  12 Hours
a) Assessment of physiological cost of work,
   Physiology of human body with respect to bones, joints and Muscles, Methods of assessing physiological cost.
UNIT V: 10 Hours
a) Anthropometric dimensions in designing work areas.
   b) Anthropometry – definition, structural dimensions, principles in application of anthropometric data, design for extreme individual, design for adjustable range, design for average, Work Habit and work posture

PRACTICAL

Code: HSRM 102-P  Total Marks: 50
No. of Weeks: 13  IA: 15
Hrs per week: 4  Practical Exam: 35

1. Write about the Use of Instruments Employed in Ergonomics;
   Treadmill, step stool, bicycle ergo meter, heart rate monitor, Lung capacitor, Noise level meter, Illumine meter, Grip Dynamometer, Flexi Curve, Sphygmomanometer, Height and weight measuring instrument.
2. Determination of heart rate and energy expenditure using - treadmill, bicycle ergo meter.
3. Determination of work load of household activities- time and motion study, pathway, operation and process chart, physiological cost –Using heart rate monitor and timer, Energy cost, cardiac cost and temporal cost.
4. Determination of Physical fitness – step stool test, energy expenditure, Aerobic capacity, Heart rate (oxygen consumption)
5. Determination of body dimensions using anthropometric kit (data to be analysed statistically)

REFERENCES:

Semester I  
Resource Management

Paper III  
HOUSING AND BUILDING MATERIALS

Code: HSRM –103
Total Marks: 100  
Hours: 52  
Theory: 70  
Instruction Hrs/Week: 04  
Internal Assessment: 30

OBJECTIVES:

- Recognize the role of housing for Natural development.
- Be aware of Housing standards, legislation and cost estimation for housing construction.
- To know the various building materials.

Unit I: 08 Hours
Introduction to Housing: Brief history, trends in housing, factors affecting housing and types of housing.

Unit II: 12 Hours
Components of housing – foundation, Ceiling and walls, Flooring, Doors and Windows, services-lighting and electrical, plumbing and sanitation, Air conditioners and Accessories.

Unit III: 10 Hours
Housing Standards and Legislations: Building codes, floor space index, and role of civic authorities in housing (BDA, BWSSB, KPTCL, BBMP)

Unit IV: 12 Hours
Introduction to building materials: Stones, cements, concrete, plywood, glass, clay products, adhesives, plastics and related products, gypsum and Related products.

Unit V: 10 Hours

PRACTICAL

Code: HSRM 103-P
Total Marks: 50  
No. of Weeks: 13  
IA: 15  
Hrs per week: 4  
Practical Exam: 35

1. Draw Architecture Symbols and write the Set Backs for various dimensions of residential sites.
2. Draw house plans to scale for residential site for given dimensions.
3. Illustrate different types of doors, Windows and floors.
4. Conduct a market survey on building materials and write a report.
5. Conduct a market survey on different types of Air Conditioners.
REFERENCES:

Semester I
Resource Management

Paper IV
FURNITURE AND FURNISHINGS

Code: HSRM –104
Total Marks: 100
Hours: 52
Theory: 70
Instruction Hrs/Week: 04
Internal Assessment: 30

OBJECTIVES:
To enable students to

- Understand the history of furniture design
- Gain knowledge about furniture used in interiors
- Understand the different types of furnishing materials used in interiors.

UNIT 1 10 Hours
FURNITURE DESIGN
History of furniture Design, Styles in furniture design, Types of Furniture –Purpose, Materials, Anthropometric measurements in relation to furniture, Furniture joints, modular furniture.

UNIT 2 04 Hours
FURNITURE SELECTION AND ARRANGEMENT
Factors to be considered in selection of furniture, Principles of furniture arrangement.

UNIT 3 12 Hours
FURNISHINGS
Furnishing materials for curtains, draperies, Bed linen, and upholstery- Types of weaves, dyeing and printing, Types of curtains and draperies, Types of sheets, table linen, bed linen.

UNIT 4 12 Hours
UPHOLSTERY
Meaning, Parts of an upholstered furniture, Types of materials used in upholstery, Selection and maintenance of upholstery fabrics
UNIT 5

FLOOR COVERINGS
Meaning, Types of floor coverings used in interiors, Types of carpets on the basis of construction method, Factors to be considered in selection of floor coverings.

PRACTICAL

Code: HSRM 104-P
No. of Weeks: 13
Hrs per week: 3
Total Marks: 50
IA: 15
Practical Exam: 35

1. Illustrate different styles of furniture design
2. Illustrate different types of furniture joints.
3. Using Furniture templates arrange furniture for living room, bed rooms.
4. Illustrate different styles in window dressing.
5. Market survey on current trends in floor coverings and write a report

REFERENCES

Semester I
Resource Management

Paper V (Soft Core)
RESEARCH METHODOLOGY IN MANAGEMENT

Code: HSRM –105
Total Marks: 100
Hours: 48
Theory: 70
Instruction Hrs/Week: 03
Internal Assessment: 30

OBJECTIVES:

➢ To understand the significance of research Methodology in Resource Management.
➢ To understand the types, tools and methods of research and Develop the ability to construct data gathering instrument appropriate to the research Design.

Unit I: Introduction to Research
Meaning, definition, characteristics and purpose of research, Ethics in Research, qualities of a research worker, types of research.

Unit II: Research Design
Identification of Research problem, definition, need structure, Classification and formulation of research design, characteristics and formulation of research design.
Unit III: Sampling Techniques 10 Hours
Meaning of sample, terms and concepts used in sample and sampling design, Population versus Sample, methods of sampling – probability and non probability, merits and demerits of sampling techniques.

Unit IV: Data Collection: 10 Hours
Primary and secondary data, Measurements and scaling techniques, Methods and tools in data collection, Reliability and validity of data collection instruments, Pilot study.

Unit V: Scientific Writing 12 Hours
Preparation of research proposal, presentation of synopsis, guidelines for writing research report. Parts of dissertation – introduction, review, methodology, results and discussion, summary and conclusion, references, recommendations, appendix.

REFERENCE:


Semester II
Resource Management

Paper I
ADVANCE MANAGEMENT

Code: HSRM –201
Total Marks: 100
Hours: 52
Theory: 70
Instruction Hrs/Week: 04
Internal Assessment: 30

OBJECTIVES:
To enable students to

➢ To understand the significance of management in organisations
➢ Know the conceptual, human and specific aspects of management functions
➢ Develop ability to evaluate the management efficiency and effectiveness in organizations

UNIT I 10 Hours
INTRODUCTION TO MANAGEMENT
Concept of Management, Importance of Management in all areas of work, Administration Vs Management, Application of management in the field of Science and as a profession ,Management ethics ,Total quality Management, Role of values ,goals and Standards in Management, Levels of management, Management skills, Current trends.
UNIT 2
HUMAN BEHAVIOUR IN ORGANISATIONS
Personality, Attitude and Motivating Factors, Group behaviour and Dynamics, Team Management, Stress and Conflict Management in Organisations.

UNIT 3
MANAGEMENT AS A SYSTEM
Definition, Elements, Types, Advantages and Limitations of systems approach to Management.

UNIT 4
DECISION MAKING
Meaning, Types of Decisions, Techniques and tools in Decision making- Decision tree and Cost benefit analysis.

UNIT 5
MANAGEMENT FUNCTION AND PROCESS
Planning – Objectives, Principles, policies, strategies
Controlling- Tools for management control
Evaluation – Tools and techniques, Appraisal.

REFERENCES

Semester II
Resource Management

Paper II
BUILDING SERVICES

Code: HSRM – 202
Hours: 52
Instruction Hrs/Week: 04
Total Marks: 100
Theory: 70
Internal Assessment: 30

OBJECTIVES:
To enable students to
- Understand the various aspects of Building services.
- Acquire knowledge of electrical wiring in interiors.
- Understand the requirements of good acoustics in interiors
- Understand the importance of air control in interiors
UNIT 1
BUILDING SERVICES

UNIT 2
ELECTRICAL SERVICES
Electric power connections –AC and DC, Types of wiring systems for buildings ,Electric system-3 Phase and single phase ,Simple electrical layouts.

UNIT 3
ACOUSTICS
Definition, Requirements of good acoustics ,Properties of sound-Sound waves, wavelength, frequency, resonance ,sound levels, loudness and noise, sound reflection, echoes, sound absorption ,sound absorption materials used in interiors, guidelines for good acoustical design

UNIT 4
VENTILATION
Definition, Importance of good ventilation in buildings, Guidelines for good ventilation, recommended fresh air supply, Size of openings for natural ventilation.

UNIT 5
AIR CONDITIONING
Definition, Need for air conditioning, Atmospheric conditions for human comfort, Principle of air conditioning, Types of air conditioners. Application in different areas in a building.

PRACTICAL

Code: HSRM 202-P
Total Marks: 50
No. of Weeks: 13
IA: 15
Hrs per week: 3
Practical Exam: 35

1. Illustrate different types of plumbing materials.
2. Illustrate different types of water traps.
3. Draw an electrical lay out for a residential building.
4. Market survey on different brands of Air conditioners for residence.
5. Market survey on different types of sound absorptive materials.

REFERENCES
Semester II
Resource Management

Paper III
CAD AND GRAPHIC DESIGN FOR INTERIOR

Code: HSRM –203
Total Marks: 100
Hours: 52
Instruction Hrs/Week: 04
Internal Assessment: 30

OBJECTIVES:

➢ Learn Computer in Interior Designing
➢ Develop hands on Experience in Use of basic and modifying tools.

Unit I: 12 Hours
Introduction to CAD Application
• Importance, Uses and its application
• Creating and Organizing 2D drawings

Unit II: 14 Hours
• Basic Commands – use of line, circle, arch, ellipse, box
• Edit tools – Trims, Chamfers, O-track, fillets, rotate, mirror, Offset

Unit III: 08 Hours
• Use of View, Format, tools, insert and modify menu.

Unit IV: 10 Hours
• Dimensions – types and Variables
• Text and fonts

Unit V: 08 Hours
• Techniques of Productivity and Management using Layers, Line types

PRACTICAL

Code: HSRM 203 - P
Total Marks: 50
No. of Weeks: 13
IA: 15
Hrs per week: 4
Practical Exam: 35

1. Introduction to CAD Window
2. Co ordinate System
3. Use of Basic tools
4. Use of Modifying Tools
5. Drawing with Basic Elements
6. Introducing Dimensions and Text
REFERENCES:
3. Steven Harrington, Computer Graphics, MCGH.
5. Yeshwant kanetkar, Graphic BPB Publisher

Semester II
Resource Management

Paper IV
HUMAN RESOURCE MANAGEMENT

Code: HSRM –204
Total Marks: 100
Hours: 52
Instruction Hrs/Week: 04
Internal Assessment: 30

OBJECTIVES:

➢ To enable the student to know the importance of human resource development.
➢ To understand the selection, recruitment and training process.
➢ To gain knowledge on performance appraisal, promotion and transfer.

Unit-1 10 Hours


Unit-2 12 Hours


Unit-3 10 Hours

Unit-4 10 Hours


Unit-5 10 Hours

Promotion and Transfers- Purpose of Promotion, Basis of Promotion, Meaning of transfer, Reason for Transfer, Types of Transfer, Separation, Types of Separation, Exit Interview, Exit Benefit.

REFERENCES:

Unit IV: Analysis and Interpretation of Data: 08 Hours
Analysis of data, characteristics of data, Data preparation-data editing, data coding. Interpretation of data-forms of Interpretation, essential and prequisites and precautions of interpretation and

Unit IV: Measures of Central Tendency: 12 Hours
Objectives of average, requisites of a good average, types of average- mean, median and mode, merit and limitation.

Measures of variation – definition, significance, properties and methods of studying variation – range, quartile deviation, mean and standard deviation, co-efficient of variation- merits and demerits.

Unit V: Statistical inference 12 Hours
Karl-person’s co-efficient of correlation Spearman’s rank correlation, Procedure for testing hypothesis, X2-test, F-Test, t-test, analysis of variance, correlation-definition, significance.

REFERENCE:

Government of Karnataka
Department of Collegiate Education

Smt. VHD  Central Institute of Home Science
Seshadri Road, Bangalore 560 001

2 Years Post Graduate Program in Home science
2014-2015

Department of Food and Nutrition
### I semester of Post Graduate Programme in Food and Nutrition

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Total credits per semester **26**
II semester of Post Graduate Programme in Food and Nutrition

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Total Credits per semester: 26
Semester-I
Food and Nutrition

Paper I
HUMAN PHYSIOLOGY

Code: HSFN 101                                                                                Total marks:100
Hours: 52                                                                                                       Theory:70
Instruction hrs/week : 04                                                                                   IA:30

Objectives:

This course will enable students to:

- Advance their understanding of some of the relevant issues and topics of human physiology
- Enable the students to understand the integrated function of all body systems
- To study the recent advances in human physiology

Unit 1 Basic tissues 8 Hrs
- Classification
- Structure
- Functions
- Haematopoeisis
- Blood coagulation
- Blood groups

Unit 2 Nervous system 10 Hrs
- Structure of Brain and spinal cord and its functions
- Autonomous nervous system
- Reflex action
- Conduction of nerve impulse
- Neurotransmitters
- Afferent and efferent nerves
- Blood Brain Barriers
- Cerebrospinal fluid
- Structure and functions of skin; eye, ear, nose and tongue

Unit:3 Endocrine and immune system 10 Hrs

A-Endocrine system
- Endocrine glands--structure and functions
- Secretions of endocrine glands and effect of hypo and hyper secretions.

B -Immune system
- Cell mediated and humoral immunity
- Activation of WBC and production of Antibodies.T cells, B cells
- Role of Thymus
Unit 4

A- Digestive system 20 Hrs

- Structure and functions of the digestive system
- Physiology of digestion of food.
- Motility of GIT

B- Cardiovascular system
- Anatomical considerations of heart and cardiovascular system
- Cardiac cycle
- Types of circulation
- Cardiac output
- ECG
- Heart sounds
- Stroke volume
- Blood pressure and its regulation

C- Respiratory system

- Structure of respiratory tract
- Mechanism of respiration
- Respiratory control
- Vital capacity

D- Excretory system

- Structure and functions of excretory tract
- Physiology of urine formation
- Composition of urine
- Role of kidneys in maintaining water, electrolyte and acid-base Balance

Unit 5 4 Hrs

- Reproductive system
- Structure and functions of male and female reproductive organs

REFERENCES

5- Jain A.K Text Book of Physiology, vol 1 and II. Avichal Publishing Co New Delhi
Semester-I
Food and Nutrition
Paper II

NUTRITIONAL BIOCHEMISTRY

Code: HSFN 102                                                                                              Total marks:100
Hours: 52                                                                                                     Theory:70
Instruction hrs/week: 04                                                                                       IA:30

Objectives:

To enable the students to:

- Further augment the biochemistry knowledge acquired at the undergraduate level
- Become proficient for specialization in nutrition and dietetics.
- Understand integration of cellular level metabolic events to nutritional disorders and imbalances.

Unit 1                                                                                                              12Hrs

- pH, physiological relevance, buffers and their biological importance
  Water as a solvent of life
- Polysaccharides: Definition, classification and functions of homo and hetero polysaccharides, nutritional significance of polysaccharides
- Fat: types and their nutritional significance
- Blood proteins: nature and functions
- Enzymes: characteristics, classification, functions, iso-enzymes, clinical significance

Unit 2                                                                                                              10Hrs

- Thermodynamics: laws, application of thermodynamic principles in living system
- Bioenergetics: energy transfe, free energy concept, exergonic and endergonic reactions. High energy compounds
- Biological oxidation: stepwise process mitochondrial electron transport chain - - compounds, schematic representation indicating sites of energy conservation ATP synthesis, oxidative phosphorylation

Unit 3                                                                                                              10Hrs

Metabolic fuels in the fed and fasting state

- Energy yielding metabolism, carbohydrate metabolism—Glycolysis, TCA cycle, gluconeogenesis, pentose phosphate path way, glycogen metabolism, impairment in carbohydrate metabolism
- Lipid metabolism - - beta oxidation of fatty acids, biosynthesis of fatty acids, biosynthesis and breakdown of cholesterol and phospholipids, disorders of lipid metabolism
- Amino acid metabolism – general reactions and urea cycle
- Nucleotide metabolism – biosynthesis and degradation of nucleotides, disorders of nucleotide metabolism
Unit 4 10Hrs

- Molecular biology: central Dogma, DNA replication, transcription and translation
- Mutation: principle, types, effects, mutagens
- Nutrigenomics and human genome project: definition, concept and theory

Unit 5 10Hrs

- Free radicals: generation (both enzymatic and non enzymatic) oxidative tissue damage
- Antioxidant nutrients: source, principle compounds, other protective compounds in foods, inhibition of carcinogen activation
- Minerals: source, daily requirement, dietary source and functions of copper, zinc, selenium, chromium, manganese, fluoride, lithium, iron and iodine

NUTRITIONAL BIOCHEMISTRY
PRACTICALS

Code: HSFN 102P  Total marks:100
No. of weeks: 13  Practicals:70
Hours/week: 08  IA:30

Unit 1.
Food analysis: Estimation of calcium, inorganic phosphorus in food

Unit 2.
Estimation of Ascorbic acid and protein in foods

Unit 3.
Blood analysis: Estimation of calcium, inorganic phosphate, albumin-globulin ratio, haemoglobin, glucose, urea, creatinine and cholesterol

Unit 4.
Enzyme assays – estimation of serum alkaline phosphatase and Transaminase activity

REFERENCES

1. Nutritional Biochemistry II edition - By Tom B. Roddy Academic Press USA
OBJECTIVES:
This course is designed to:

• Provide in-depth knowledge of the physiological and metabolic role of macro and micro nutrients and their importance in human nutrition.
• Familiarise with the recent advances in nutrition and apply this knowledge in planning for public health programme.
• To enable the students to translate the knowledge into practical guidelines for dietary needs of human nutrition at different stages of life.

UNIT 1: 4Hrs

Body composition

• Significance of body composition and changes through the life cycle
  - Methods used for measurement of body components.
  - Body fat, Fat Free Mass (FFM), Factors affecting the two
  - Influence of Energy Excess and Energy deficit in body composition

UNIT 2: 4Hrs

Energy

• Energy intake verses Energy Expenditure, Energy Balance.
• Components of energy expenditure: RMR, BMR, PAL, PAR, Thermic effect of food.
Control of food intake – Role of leptin and other hormones.
• Latest concepts in energy requirements and recommendation for different age groups.
• Energy imbalance: An overview

UNIT 3: 20Hrs

a. Carbohydrates

• Physiological functions
• Types of carbohydrates in Indian diets and their contribution to energy intake. Glycemic Index of food and its uses. Glycemic load.
• Dietary fibre – Components, Sources, Role of dietary fibre in human nutrition
• Resistant starch and fructo oligosaccharides-Physiological effects.
• Modification of carbohydrate intake for specific disorders – Lactose Intolerance, Diabetic mellitus and Dental caries
• Artificial sweeteners

b. Proteins

• Classification, Physiological functions
• Methods of estimation of Dietary proteins.
• Therapeutic application of amino acids, Protein quality, Methods of evaluating protein quality
• Protein and amino acid requirements throughout life cycle
• Protein deficiency
• Kwashiorkor and Marasmus – clinical features and biochemical changes
c. Lipids
- Physiological functions
- Nutritional significance of fatty acids. SFA, MUFA, PUFA.
- Role of n3 and n6 fatty acids.
- Role of lipoprotein and cholesterol, triglycerides in Health and Disease
- Requirements of total fats and fatty acids requirements.
- Deficiency of Essential Fatty acids

Unit: 4 4Hrs
Water
- Distribution and functions
- Water balance and its regulation - Role of hormones and electrolytes
- Requirements for water
- Disturbances in fluid balance – Dehydration, oedema and water toxicity

Unit: 5 20Hrs
a. Macrominerals - Calcium, Phosphorous, Magnesium, Sodium, Potassium, Chloride, Sulphur
b. Microminerals - Iron, Copper, Zinc, Manganese, Iodine, Fluoride
For each mineral the following should be discussed:
- Physiological functions
- Food sources
- Bioavailability (wherever applicable) factors affecting bioavailability.
- Interaction with other nutrients.
- Requirements, deficiency.

c. vitamins
a. Fat soluble vitamins - Vitamin A, Vitamin D, Vitamin E, Vitamin K
b. Water soluble vitamins - Thiamine, Riboflavin, Nicotinic acid, Pyridoxine, Folic acid, B12, pantothanic acid, biotin, choline, inositol, vitamin C
For each nutrient following should be discussed:
- Physiological functions
- Food sources
- Interaction with other nutrients - Macro nutrients, vitamins, minerals.
- Requirements, deficiency and toxicity
- Assessment techniques (Invasive and Non Invasive – A Brief mention)
- Bioavailability (wherever applicable)

HUMAN NUTRITION PRACTICALS

Code: HSFN 103P  Total marks:100
No. of weeks: 13  Practical:70
Hours/week: 08  IA:30

Unit 1
a. Planning and preparation of protein rich recipes and comparison with reference Protein(Eggwhite)

b. Planning of recipes with low Glycemic Index and calculate the glycemic load
Unit 2
a. Planning and preparation of recipes rich in soluble fibre and calculate
b. Planning and preparation of vegetarian recipes with optimal omega fatty acids ratio.

Unit 3.

a) Planning of recipes to increase the bioavailability of calcium
b) Planning of recipes to increase the bioavailability of Iron

Unit 4

a) Analysis of Body composition using TANITA and BODY STAT apparatus
b) Estimation of energy intake and expenditure to arrive at energy balance

References:
3. WHO Technical Report Series
4. Indian Council of!Medical Research, Recommended Dietary intake for Indians – Latest Recommendations

Journals:
1. Nutrition Reviews
2. International Journal of vitamin and Nutrition Research

Semester-I
Food and Nutrition
Paper-IV

RESEARCH METHODOLOGY

Code: HSFN 104
Hours: 52
Instruction hrs/week: 04

Total marks:100
Theory:70
IA:30

Objectives:
- To develop a scientific approach and understand the process of research
- To develop the competence for selecting methods and tools appropriate for research topics
- To prepare the students to design and carry out research studies in the field of food and nutrition

Unit 1

a) Role, need and scope of research in food and nutrition
b) Research process
  - Identifying interest areas and prioritising
• Selection of the topic and considerations in selection
• Review of related literature and research
• Formulate concepts, hypothesis and theories
• Research designs
• Research questions, objectives and assumptions
• Hypothesis - meaning, attributes of a sound hypothesis stating the hypothesis and types of hypothesis

c) Funding agencies for research
d) Ethics in research

Unit: 2

• Types of research
• Basic and applied research
• Quantitative and qualitative research

A. Quantitative research
- Design strategies in research
- Descriptive studies
  - types of descriptive studies
  - case reports and case studies
  - cross sectional surveys

B. Qualitative research
- Types of qualitative research
- Tools techniques and methodologies, RRA[Rapid Rural Appraisal], PRA[Participatory Rural Appraisal]

C. Analytical studies
- Overview of types of cohort studies and intervention studies

Unit: 3

• Tools for data collection
• Primary and secondary methods of data collection
• Different types of questionnaires, rating scales, check lists, attitude scales, inventories standardised tests, interviews, observation
• Development of tools, estimation of reliability and validity of tools

Unit: 4

• Sampling
• Meaning, concept of population and sample, and utility
• Types of sampling and generalizability of results
• Probability sampling - simple random sample, systematic random sample, stratified random sampling etc. – random and non random samples, random numbers and use
• Non probability sampling – purposive samples, incidental samples, quota samples snow ball samples
• General considerations in determination of sample size

Unit: 5

• Report writing
• Research publications- citation index, impact factor
• Writing research proposals
References:

Semester-I
Food and Nutrition

Paper V
SOFT CORE-FOOD PRESERVATION

Code: HSFN 105 Total marks:100
Hours: 48 Theory:70
Instruction hrs/week : 03 IA:30

Objectives:

➢ To gain knowledge about principles and methods of food preservation
➢ To give an insight about the types of food preservation

Unit: 1
Food spoilage,
spoilage caused by microorganisms (bacteria, fungi, and virus),
enzymes, pets and rodents.

Unit: 2 Contamination and spoilage of: Cereals and pulses; sugar and sugar products;
vegetables and fruits; flesh foods; eggs; milk and milk products.

Unit: 3 Principles of Food Preservation
• Principles of food preservation and their application
• Practice of Cleaning and Sanitation,
• Food dehydration and concentration
• Use of high temperature and Canning in Food Preservation,
• Use of Low temperature in Food Preservation,
• Use of Drying , Irradiation, Modified Atmosphere and Chemical preservatives,
• Food irradiation and microwave heating,
• Hurdle Concept

Unit: 4
Methods of food Preservation
a) Cold storage
b) Dry Storage
c) Using Preservatives: Class I,& class II
d) Canning, Fermentation, Irradiation
Unit 5  
8Hrs
- Irradiation and microwave heating of foods, principal effects of irradiation, advantages, disadvantages
- Method of packing- list of common packaging materials and their usage with examples.

REFERENCES

Semester-II  
Food and Nutrition  
Paper I  
STATISTICS

Code: HSFN 201  
Total marks: 100  
Hours: 52  
Theory: 70  
Instruction hrs/week : 04  
IA: 30

Objectives:
This course will enable students to:-
- To apply statistical techniques to research data for analyzing and for interpretation of data.
- To summarize data and present it using tables and graphs.
- To be able to understand the components of research proposals.
- To develop skills for preparation of research proposals and writing reports

Unit 1  
08Hrs
- Meaning and Scope of Statistics.
- Classification and Tabulation
- Graphic and Diagrammatic representation of data (frequency, histogram, graphs, bar-Diagram and pie-charts).

Unit 2  
12Hrs
- Measures of Central tendency and Dispersion (Mean, Median, Mode, Quartiles, Range and Standard Deviation).
- Correlation and Regression: Correlation and its interpretation. Product Moment and Rank order Correlation Coefficient Regression Equations (without derivation) and its interpretations, use for prediction.
Unit 3  
6Hrs  
- Elementary ideas on probability (Simple Probability) Skewness and Kurtosis definition).  
- Normal Distribution and its properties.

Unit 4  
16Hrs  
- Elements of Testing a Statistical Hypothesis – Formulation of the problem, Definition of type I and II errors. Level of Significance, t-test, Z-test.  
- Design of Experiments: Analysis of Variance.  
- Non-Parametric Inference: Sign, Mann-Whitney and $\chi^2$ test (as goodness of fit and independence of attributes in 2x2 and r x c contingency tables).

Unit 5  
10Hrs  
Software packages for statistical analysis  
- Coding of data, Editing and cleaning of data  
- Data interpretation, presentation of results

References:  
4. Journals and websites related to application statistics in food and nutrition

Semester-II  
Food and Nutrition  
Paper –II

FOOD SCIENCE

Code: HSFN 202  
Total marks:100  
Hours: 52  
Theory:70  
Instruction hrs/week : 04  
IA:30

OBJECTIVES:  
This course is designed to  
- Provide an understanding of composition of various food stuffs  
- Familiarise students with changes occurring in various foodstuffs as a result of processing and cooking  
- Enable students to use their theoretical knowledge in various applications and food preparations  
- To familiarise the students with the recent trends in food science
Unit 1
10Hrs
[A] Introduction to food science
- Bound and free water
- Colloids
- Emulsions---Types and factors affecting stability
- PH
- Osmosis
- Freezing point
- Foam—factors affecting foam volume and stability

[B] Sensory evaluation
- Factors affecting the acceptability of food
- Selection of taste panel
- Subjective and objective tests

Unit 2
8Hrs
Study of cereals and pulses
[A] Starch cookery
- Gelatinization of starch and factors affecting
- Structure and composition of cereals
- Flour and flour quality and tests for flour quality
[B] Pulses and legumes
- Structure, composition, procession.
- Toxic constituents

Unit 3
08Hrs
Fats and oils, nuts and oilseeds
[A] Fats and oils
- Sources
- Physical and chemical properties
- Effect of composition on fat properties
- Functional properties of fat
- Rancidity
- Changes during frying
- Interesterification of fats
- Factors affecting fat absorption

[B] Nuts and oilseeds
- Composition of nuts and oilseeds
- Oil extraction and by-products
Unit 4

[A] Milk and milk products
- Composition
- Physical properties and chemical properties
- Milk processing and Types of processed milk
- Fermented [cheese and yogurt] and unfermented [khoa and ice cream]
- Milk products—composition, classification, processing
- Factors affecting coagulation of casein [study of paneer]

[B] Meat, poultry, eggs and fish
Meat and poultry
- Structure and composition
- Changes during cooking
- Rigormortis
- Meat tenderisers
- Storage

Eggs
- Structure
- Composition
- Quality testing
- Changes during storage
- Grading
- Processing
- Changes during cooking
- Storage

Fish
- Classification
- Methods of cooking and changes during cooking
- Storage
- Quality buying

C-Sugar cookery and leavening agents
- Sugar cookery
  - Solubility of solution
  - Stages of sugar cookery
  - Crystallization and factors affecting it
  - Non-enzymatic browning
- Leavening agents
  - Classification
  - Methods of leavening

Unit 5

[A] Fruits and vegetables
- Structure
- Flavouring constituents
- Pigments—classification and factors affecting it
- Post harvest changes
Objectives:

➢ To study the characteristics of different food commodities, changes during cooking and storage
➢ To study techniques of improving cooking quality of food

Unit 1: Sensory evaluation of a given recipe

Unit 2: Sugar cookery:

- Stages of sugar cookery [cold water test]
- Crystallization of sugar—Factors affecting crystallization of sugar [sugar moulds]
- Relative sweetness of sugar

Starch cookery

- Microscopic observation of different types of starch
- Preparation of different types of rice to study the effect on cooking time and volume of water absorbed
- Gelatinization of starch—factors affecting gelatinization of starch
- Retrogradation/syneresis
- Factors affecting Gluten formation—Gluten test, effect of kneading and added substances on chapattis

Pulse cookery

- Effect of various methods of cooking and processing methods on characteristics of pulses
Unit 3
Fats and oils
- Smoking point
- Factors affecting fat absorption

Egg cookery
- Assessing egg quality
- Formation of Emulsion [Temporary and permanent emulsion]
- Prevention of ferrous sulphide formation
- Preparation of baked and stirred custard

Milk and milk products
- Factors affecting coagulation of casein [preparation of cream of tomato soup]
- Preparation of paneer

Unit 4
Fruits and vegetables
- Enzymatic browning in fruits [factors affecting and prevention]
- Study of factors affecting texture and pigments of vegetables

Leavened products
- Use of different leavening agents in food preparation
- Air - preparation of foam
- Steam and Biological leavening agents—preparation of idlis
- Chemical leavening agents-preparation of cakes using
  - egg white and whole egg
  - slow and fast acting baking powder

REFERENCES
Semester-II  
Food and Nutrition  
Paper III  

Nutrition Through Life Span

Code: HSFN 203                                                                 Total marks:100
Hours: 52                                                                 Theory:70
Instruction hrs/week : 04                                                                 IA:30

Objectives:

- To understand the role of nutrition in different stages of life span
- To provide the guidelines for Adequate Nutrition throughout life span
- To get acquainted with growth, development and physiological changes during pregnancy lactation and infancy
- Understand the interrelationship between nutrition and growth and development during these phases

Unit: 1 12Hrs

a. Preschool nutrition
- Growth & Development of preschool children
- Growth monitoring
- Brain development in preschool age - Effect of nutrition
- Formulation of good food habits
- Nutritional needs of preschool children
- Dietary guidelines
- Nutritional concerns in preschool children
  - Under nutrition
  - Obesity

b. Nutrition during school age
- Growth and development
- Nutritional needs
- Dietary guidelines
- Factors influencing food intake
- Breakfast practices
- Packed lunch
- School lunch programme
  Nutritional problems
- Obesity and under nutrition
- Iron deficiency
- Dental caries

Unit: 2 08Hrs

Nutrition During Adolescence
- Growth and development
- Body composition
• Sexual maturity
• Social and Psychological changes
• Nutritional needs
• Nutritional Requirements and Dietary guidelines
• Food habits
• Fast foods & its impact
• Nutritional problems:
  - Anaemia
  - Eating disorders, Anorexia nervosa & Bulimia
  - Malnutrition - under nutrition and obesity
  - Teen age pregnancy

**Unit: 3**  
04Hrs

**Nutrition during Adulthood**
• Physiological, social and psychological changes
• Pre and Post Menopausal changes in women
• Nutritional needs
• Dietary guidelines
• Importance of weight management

**Unit: 4**  
20Hrs

**a. Maternal nutrition**
• Maternal nutrition and foetal outcome
• Pica
• Nutritional assessment and guidance in prenatal care
• Pregnancy in special conditions
  - Adolescent pregnancy
  - Pregnancy and AIDS
  - Intra Uterine Growth Retardation [IUGR]
  - Congenital malformation
  - Foetal alcohol syndrome
  - Gestational Diabetes mellitus
• Nutritional deficiencies and complications of pregnancy and its management
  - Anaemia
  - IDD
  - Preeclampsia
  - Eclampsia

**b. Lactation**
• Physiology and endocrinology of lactation
• Synthesis of milk components
• Let down reflux
• Role of hormones
• Lactational amenorrhoea
• Nutritional requirements during lactation
• Human milk composition
• Exclusive breast feeding
• Factors affecting breast feeding
• Effect of breast feeding on maternal health
• Lactogogues
• Lactation problems
  ▪ Engorged breast, Sore nipples
  ▪ Breast feeding during AIDS
  ▪ Management of lactation failure
  ▪ Breast feeding by Surrogate
  ▪ Malnutrition

  - Effect on milk production
  - Effect on mothers nutritional status and well being

Infancy
• Preterm ,small for date and low birth weight infants
• Implications for feeding and management
• Growth and development during infancy
• Failure to thrive
• Nutrient needs during infancy
• Breast feeding vs Bottle feeding
• Feeding practices in special conditions
  - Cleft palate
  - Lactose intolerance
  - Infant formulae

c. Malnutrition in children
• Etiology and management – in brief

• Consequences of malnutrition on children
  - Physical development
  - Mental development
  - Cognitive development

Unit: 5
08Hrs
Geriatric Nutrition
• Theories of ageing and delayed ageing
• Physiological, socio economical and psychological factors and its effect on dietary intake
• Nutritional needs
• changes in the energy requirements
• Dietary guidelines
• Nutritional problems
  - Malnutrition – obesity and under nutrition
  - Diabetes mellitus
  - Hypertension
  - Osteoporosis
  - Rheumatism
  - Anaemia

• Assistance to elderly
  - Community living and institutionalized
NUTRITION THROUGH LIFE SPAN

PRACTICALS

Code: HSFN 203P
Total marks: 50
No. of hours weeks: 13
Practicals: 35
Hours/week: 04
IA: 15

Unit 1.
Planning and preparation of low cost diet for Pregnant and Lactating mothers

Unit 2
Planning and preparation of foods for Supplementary feeding programme for Children Planning of Breakfast/packed lunch

Unit 3.
Planning and preparation of Nutrient Dense recipes/snacks for preschool/School children /Adolescents

Unit 4.
Assessment of Growth of children
  a) Use of anthropometric measurements.
  b) Use of weight chart to measure growth.
  c) Interpretation of somatic data.

REFERENCES:
3. Nutrition and metabolism, NSI, Text Book series, edited by Michael j Gibney, IAN A Mac donald Helen M Roche, Blackwell Publishing

Semester-II
Food and Nutrition

Paper IV
FOOD SANITATION AND HYGIENE

Code: HSFN 204
Total marks: 100
Hours: 52
Theory: 70
Instruction hrs/week: 04
IA: 30

Objectives:
• To enable the students to inculcate the sanitary aspects of safe of handling food
• To help the students gain knowledge of personal and environmental hygiene
Unit: 1
10 hours

Food sanitation: Introduction, definition, importance, health hazards due to contaminated foods - Food poisoning and infections - Causative agents, symptoms, sources and mode of transmission, foods involved, Method of prevention.

Unit: 2
10 hours

Hygiene and its importance and application - Personal hygiene - care of skin, hair, hands, feet, teeth, Use of cosmetics and jewellery, Grooming, Uniform, Evaluation of personal hygiene, Training staff.

Unit: 3
6 hours

Indices of food, milk and water sanitary quality. Microbiological criteria of food, water and milk testing. Food standards, PFA, FPO, BIS, MPO, Agmark, Codex Alimentarius.

Unit: 4
10 hours

Safe handling of food - Control measures to prevent food borne diseases and precautions to be taken by food handlers. Reporting of cold, sickness, boils, septic wounds etc.

Rodents and Insects as carriers of food-borne diseases. Control techniques.

Unit: 5
16 hours

a) Disinfectants, sanitizers, antiseptic and germicide. Common disinfectants used on working surfaces, kitchen equipment, dish washing, hand washing etc. Care of premises and equipment, cleaning of equipment and personal tools immediately after use, use of hot water in the washing process. Waste disposal, collection, storage and proper disposal from the premises.

b) Legal administration and quality control, laws relating to food hygiene.

REFERENCES:

1. Rhoday Sanitation and Hygiene

Semester-II
Food and Nutrition

Paper V
SOFT CORE-FOOD MICROBIOLOGY

Code: HSFN 205
Total marks: 100
Hours: 48
Theory: 70
Instruction hrs/week: 03
IA: 30

Objectives:

To familiarize the students with recent advances in food microbiology including fermented foods, dairy, food preservation, detection of food-borne diseases, their control measures.
### Unit 1 6Hrs
- Introduction, classification of microorganisms,
- Morphology – Bacteria, yeast, mold and algae.
- Primary sources of micro-organisms in food
- Microbial growth, intrinsic and extrinsic parameters of food affecting the microbial growth.

### Unit 2 4Hrs
- Principles and types of food spoilage, Control of micro organisms – Sterilization

### Unit 3 6Hrs
- Water – sources, microbial standards for portable water
- Purification of water, water borne diseases and prevention. Food borne diseases-food infection and intoxication.

### Unit 4 14Hrs
- Microbiology of cereal and cereal products- organisms associated with grains.
- Classification and control of molds in bread. Microbiology of fruits and vegetables – contamination and control of microorganisms in fruits and vegetables.

### Unit 5 18Hrs
- Microbiology of milk and milk products
  - kinds of microorganisms
  - sources of contamination and control in
  - milk, butter, curds, yoghurt, and cottage cheese.
- Microbiology of egg, poultry, fish and meat
  - Sources of contamination, spoilage and its control.

### REFERENCES:

Government of Karnataka
Department of Collegiate Education

Smt. VHD Central Institute of Home Science
Seshadri Road, Bangalore 560 001

2 Years Post Graduate Program in Home science
2014-2015

Department of Textile and Clothing
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### II semester of Post Graduate Programme in Textile And Clothing

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**Total credits per semester**: 26
Semester-I
Textiles and Clothing

Paper I
ADVANCED FIBRE AND TEXTILES SCIENCE

Code: HSTC-101  
Total Marks: 100

Hours: 52  
Theory: 70

Instruction hrs/week: 04  
Internal Assessment: 30

OBJECTIVES:

1. To gain knowledge about the polymer system of fibres.
2. To understand the chemistry, production and fundamental properties of natural and synthetic fibres.
3. To help students gain insight and knowledge of yarn and fabric processing and construction.

Unit: I 08hours
- Polymer chemistry - Polymers, Types of polymers, Degree of polymerization, Orientation and crystallinity and their influence on fibre properties.

Unit: II 10hours
- Cellulose fibres - Physical properties, action of acids and alkalis on cellulose, Hydro and Oxy cellulose, Mercerisation, Liquid ammonia treatment.
- Cotton, Varieties, Chemical composition, Properties, Longitudinal and cross sectional view.
- Minor fibres like Linen, Jute, Hemp Sisal, Abaca - Their properties and uses.

Unit: III 08hours
- Protein fibres- Wool and Silk- Chemical composition, Physical and chemical properties of protein fibres.
- Brief description on felting of wool, Shrinkage proofing of wool, Degumming and weighing of silk.

Unit: IV 08hours
- Synthetic fibres- Polyamide, Polyester ,Polycrylic, Polyethylene, Polypropylene and Polyurethane fibres - Their physical and chemical properties, uses.
- Glass, Carbon based , Metallic, Bi components, Bi constituent and Special purpose fibres - Their physical and chemical properties, uses.
- Popular Blends of different fibres- Composition, properties and uses.

Unit: V 08hours
- Principles of Yarn manufacture- conventional system and recent developments in spinning,
- Yarn nomenclature and measurement- Yarn types, yarn classification- spun, filament, textured, novelty Yarn ,
- Yarn numbering system.

Unit: VI 10hours
- Weaving - sequence of operations in warp and weft preparation.
- Design, Draft, Peg plan for Basic weaves.
- Various types of looms.
- Application of colour and design.
- Application of technical textiles.
PRACTICALS

HSTC: 101 - P
Total Marks: 50
Number of weeks: 13
Internal Assessment: 15
Hours per week: 4hrs / week
Practical Exam: 35

Unit –I
Identification of fibres- Cotton, Polyester, Viscose, Polyamide, Silk, Wool, Jute - Burning test,
Microscopic examination,

Unit –II
Quantitative analysis of blends- PC, PV, PS, CS.

Unit –III
Setting in a simple loom and weaving process.

Unit –IV
Fabric analysis - design, repeats, drafts and other details.

Unit – V
Collection and Identification of samples for different types of weaves .

Unit –VI
Visit to spinning and weaving Unit

REFERENCES:
2. Cook J Gordon, Handbook of Textile Fibres, Man made Fibres, Merrow Publishing Co. Ltd.,
    England.
4. Spun Yarn Technology- Eric Oxtoby Butler Worth Publication
7. Irene Waller: Designing with Threads
9. Corbman B: Fibre to Fabric

Semester-I
Textiles and Clothing

Paper II
ADVANCED CLOTHING DESIGN DEVELOPMENT

Code: HSTC-102
Total Marks: 100
Hours: 52
Theory: 70
Instruction hrs/week: 04
Internal Assessment: 30

OBJECTIVES:
1. To gain knowledge about the advances in clothing design development
2. To understand the Grading, Dart manipulation and Fit
Unit: I 10hours
➢ Body garment relationship - 7 &1/2, 8 and 10 head theory.
➢ Standard Ideal Figure, Figure types, Figure analysis, Figure variations
➢ Handling figure Problems /Remedies.

Unit: II 08hours

Unit: III 08hours
Grading - Introduction and Significance, Techniques, Grading Sizes.

Unit: IV 08hours
Fit in clothing - 1st and 2nd Trials. Fit components, Fit Evaluation Custom made clothing

Unit: V 08hours
➢ Seams - functional, decorative, protective, enclosed.
➢ Garment components - Collars, sleeves, skirts, yokes. Closures, pockets.

Unit: VI 10hours
➢ Fabric preparation, Pattern layouts, Cutting and marking.
➢ The future of the clothing Industry.
➢ Applied clothing Design
➢ Computer applications in pattern and clothing design development.

PRACTICALS

HSTC: 102 - P Total Marks: 50
Number of weeks: 13 Internal Assessment: 15
Hours per week: 4hrs / week Practical Exam 35

Unit: I
➢ Sewing machine - Advanced, functions, attachments.
➢ Tools for clothing construction and design - Measuring, Marking, Cutting, Sewing, Pressing.

Unit: II
Pattern preparation for Garment construction - Assembling Basic Bodice, Sleeve and Skirt.

Unit: III
Designing Children’s Clothing from basic blocks (Drafted) - Infant, Child - 2 each

Unit: IV
➢ Designing women’s clothing from basic blocks (draped).
➢ Close fitted, Not close fitted - 2 each

Unit: V
Designing Men’s wear from commercial patterns - Casual/Sport/Ethnic (any one)

Unit: VI
Grading Sizes - 1 to 4
REFERENCES:

Semester-I
Textiles and Clothing

Paper III
HISTORIC COSTUMES

Code: HSTC-103  Total Marks: 100
Hours:  52  Theory:  70
Instruction hrs/week: 04  Internal Assessment: 30

OBJECTIVES:
To enable students to gain knowledge on
➢ Historic textiles and costumes of different countries
➢ Historic textiles and costumes of India

Unit: I  10 hrs
➢ Introduction to costumes as an expression of art and creative ability.
➢ Beginning of costume- impulse for dress from painting, cutting and tattooing of skin.
➢ Factors influencing costume changes.

Unit: II  12hrs
➢ Costumes of ancient civilization-Indian, Egyptian, Greek & Roman.
Medieval costumes-French Renaissance, European, English,
➢ costumes of China & Japan.

Unit: III  10 hrs
Costumes from 1600AD to 2000AD-India, French, English & American.

Unit: IV  08hrs
Study on regional costumes of India-East, West, North & South

Unit: V  08hrs
Indian Historical Textiles of Special significance-Carpets, Tapestries, Brocades, Laces, Shawls, Resist dyed, Ikat Fabrics, Printed & Painted.
Unit: VI

- Growth of customized clothing, Factors influencing, World wars, Technology, Mass production.
- An overview of costumes used from ancient to present.

**PRACTICALS**

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</table>

Unit- I : Sketching of Indian, Egyptian, Greek and Roman Costumes for both men and Women- One each

Unit – II: Sketching of Medieval costumes for French, European, English – One each

Unit – III : Sketching of Accessories, Hand Bags and Jewelries– One each

Unit – IV: Sketching of Regional costumes of India East, West, North & South– One each

Unit V: Collection of historic textiles and Costumes

Unit – VI:Visit to Museum

**REFERENCES:**

5. Dr, Karan Singh, (1985), Textiles of Ancient India, Orbis publishing Ltd, U.S.A.

**Semester-I**

**Textiles and Clothing**

**Paper IV**

**FASHION DESIGN**

<table>
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**OBJECTIVES:**

- To enable students to gain knowledge in fashion and fashion trends in apparel.
- To understand the design fundamentals and gain knowledge about fashion industry and fashion forecasting.
Unit: I
- Introduction to fashion design.
- Elements and principles of design with special emphasis to fashion.
- Components of Fashion-Sillouhette, details, colour, fabric, texture, seams, trims.

Unit: II
- Drawing of human figure with contour, gesture and model drawing.
- Expression of figure through a variety of media approaches,
- How to draw lay figures- 3/4 view of lay figure,
- Proportion of figure, Measuring 8, 10, 12 heads.

Unit: III
- Introduction to formal, casual, ethnic wear - their feature and functions.

Unit: IV
- Garment and garment details-necklines, collars, sleeves, shirts and pants, blouses, coats and jackets, drawstrings, fasteners, tassles and tucks, frills,gather, fringes, hemlines and insertion, laces, macame, patch work, pleats, quilting ties, shirring, smocking, yokes and underskirts.

Unit: V
- Fashion cycle, Fashion Theory, Fad, factors effecting fashion, trends based on climate, age groups and generations.
- Classic seasons in fashion industry and calendar of events.
- Fashion houses, mass fashion and boutiques.

Unit: VI
- Sources of inspiration for designing and apparel categories, prevailing.
- Fashion trends in children, adolescents men’s and women’s wear
- CAD in fashion design

PRACTICALS

HSTC: 104 - P
Number of weeks:13
Hours per week: 4hrs / week
Total Marks: 50
Internal Assessment: 15
Practical Exam 35

Unit: I
- Sketching of different part of the body-face, hands, legs, hairstyle
- Drawing of 8, 10, 12 head figure for women. (Side and back, Front and ¾ view)

Unit: II: Basic Rendering techniques

Unit III: Developing garment line based on any one theme

Unit: IV: Sketching of accessories – hats, footwear, bags and purses and jewelry

Unit: V: Port polio development for fashion show – One theme

REFERENCES:

Semester-I
Textiles and Clothing

Paper V
SOFT CORE -RESEARCH METHODOLOGY & STATISTICS

Code: HSTC-105                      Total Marks: 100
Hours:  48                          Theory:    70
Instruction hrs/week: 03           Internal Assessment: 30

OBJECTIVES:
- To understand the significance of research methodology in Home Science research.
- To study the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To be able to appreciate and understand importance of writing scientifically.
- To understand the role of statistics and computer applications in research.
- To apply statistical techniques to research data for analyzing and interpreting data meaningfully.

Unit: I
Introduction to research.          03 hrs
- Nature, Scope and Objectives of research.
- Role of research in Home science discipline.
- Qualities of a research worker.
- Types of research.

Unit: II
Identification of research problem and sampling.  10hrs
- Sources of research problem.
- Criterion for the selection of research problem.
- Justification.
- Definition of hypothesis, Types of hypothesis.
- Limitation and delimitation of a problem.
- Criterion for selecting sampling techniques.
- Probability sampling
- Non probability sampling.

Unit: III
Qualitative Research Methods        10hrs
- Definition and types of qualitative research
- Methods of data collection.
- Tools of research
- Reliability and validity of data gathering instruments.
- Pilot study
Unit: IV  
Scientific writing and dissertation  
- Preparation of research proposal  
- Presentation of synopsis  
- Writing for grants  
- Guidelines and procedures involved in writing a research report  
- Articles for journals/ Review of articles

Unit: V  
5 hrs  
- Classification and tabulation of data.  
- Frequency distribution- Histogram, Frequency polygon, Ogives.  
- Measures of central tendency- Arithmetic mean, Median, Mode.  
- Measures of variation- Range, Quartile deviation, Mean deviation and Standard deviation

Unit: VI  
10hrs  
- Testing of hypothesis- Procedure for testing hypothesis  
- Chi-square test.  
- Application of students ‘ t ‘ test for small samples.  
- Correlation, Karl Pearson’s coefficient of correlation, Rank correlation.  
- Analysis of variance- one way and two way classification

REFERENCES

Unit: I
- Introduction to the Indian apparel industry
- Organizational structure & sectors of the garment industry.
- Types of apparel products
- Basic garment components.
- Classes of stitches
- Seams & applications.

Unit: II
- Sewing machines-types, general care, maintenance, problems & solutions.
- Overlocking, blind stitches, buttonhole.
- Needles & effects on fabrics
- Feed mechanism, machine attachments.

Unit: III
- Preproduction planning
- Preparation of sample & sample approval.
- Types of patterns, checking patterns, fabric & accessory procurement.
- Marker planning, methods, efficiency & use.
- Matching fabric checks & stripes.

Unit: IV
- Spreading Machines, Spreading methods, Lay planning, Fabric packages, splicing, Cutting techniques & Quality cutting,
- Cutting machines & equipment, Fabric loss in cutting, Numbering & bundling
- Fusing technology-machinery & equipment, Types of fusing material & fusing process
- Advantages of using interlining.

Unit: V
- Garment production, sequence of production operations in the garments
- Pressing & folding process, Purpose & categories of pressing

Unit: VI
- Packaging – Types, functions & scope of packaging.
- Quality specification for packaging materials, Packaging instructions, Packaging ratio.
- Labelling & storage.
- Export Documentation - Procedure involved and documents to be maintained

REFERENCES
OBJECTIVES:

➢ To enable students gain knowledge of the various textile testing methods done to assess the quality of fabrics, yarns and fibres.
➢ To gain knowledge on Quality assurance measures followed to assess the fabrics and apparel.

Unit: I

➢ Introduction to textile testing.
➢ Terminology- Fibre maturity, Fibre fineness, Moisture regain, Moisture content, Fibre length, Yarn numbering, Yarn twist, Breaking load, Stress, Strain, Load elongation curve, Young’s modulus, Elastic recovery, Yield point, Work of rupture, Flexural rigidity, Cover factor, Visco-elastic property.

Unit: II

➢ Selection and preparation of samples for testing- Definition, Factors to be considered in fiber, Yarn and fabric sampling.

Unit: III

➢ Fibre tests- Cotton:- Length, Strength, Fineness, and Maturity ratio, Moisture related properties.
➢ Yarn tests- Twist, Count, Strength, Evenness, Crimp.

Unit: IV

Fabric tests-

➢ Fabric dimensional tests- Weight, Length, Width, Thickness, Cloth count, Cover factor, Crimp, bending.
➢ Strength tests- Tensile, Abrasion, Bursting.
➢ General tests- Air permeability, Pilling, Drape, Crease Recovery, Flammability.
➢ Colour fastness tests- Washing, Light, Perspiration, Rubbing.
➢ Apparel Testing - seam strength, seam slippage and colour fastness properties
➢ Fabric defects--Raw material, Weaving ,Wet processing faults.

Unit: V

Quality Control

➢ Definition, Importance and Methods involved in determining quality of fabrics.
➢ Textile specification standards- ASTM, AATCC, BIS, Use of quality control chart.
➢ Role of information technology in textile testing and quality control.
Unit: VI  
Textile industry versus Environment, Pollution-Types, causes, remedies. ISO14000-Implications.

PRACTICALS

HSTC: 202 - P  
Total Marks: 50  
Number of weeks:13  
Internal Assessment: 15  
Hours per week: 4hrs / week  
Practical Exam 35

Unit I  
Fibre tests- Length, Fineness, Maturity ratio, Moisture absorption.

Unit II  
Yarn tests- count, twist, strength, evenness.

Unit III  
Fabric tests- Length, Width, Weight, Count, Thickness, Bending, Crimp, Crease, Recovery, Drape, Pilling, Strength, Color fastness.

Unit IV  
Determination of fabric defects- Raw material, Weaving, Dyeing and Printing.

REFERENCES

Journals:
1. Indian Textile Journal.
5. Textile Horizon.
6. ISO Publication.

Semester-II  
Textiles and Clothing

Paper III  
FABRICS FOR INTERIORS

Code: HSTC-203  
Total Marks: 100  
Hours: 52  
Theory: 70  
Instruction hrs/week: 04  
Internal Assessment: 30

Objectives:
- To enable students to gain knowledge in the selection of fabrics for interiors
- To understand the students on designing and application of different fabrics for interior.
Unit-I
- Introduction to fabric used in interiors.
- Definitions related to interiors, fabrics commonly used, trimmings
- Bedding, accessories, Rugs, Upholstery.

Unit-II
- 10hrs
  Household linen—Classifications, Table linen, Bed room linen, Kitchen, Bathroom
  Commercial Interiors..

Unit-III
- 10 hrs
  - Draperies, Curtains and Upholstery-
  - Selecting fabrics, Types, Styles. House courtiers, Printed fabrics for Home decoration,
  - Made to order curtains.

Unit-IV
- 10hrs
  - Floor and wall coverings—
  - Selection, Types, Styles.

Unit-V
- 10hrs
  Surface Embellishment- Importance and its application to the interior fabrics.

Unit-VI
- 04hrs

PRACTICALS

HSTC: 203 - P
Number of weeks: 13
Hours per week: 4hrs / week

Unit-I
Designing and developing of bed linen – sample preparation with suitable embellishments.

Unit-II
Designing and developing of table linen- sample preparation with suitable embellishments.

Unit-III
Designing and developing samples for door and window curtains.

Unit-IV
Preparation of floor coverings by any one method.

Unit-V
Visit to furnishing houses and collection of swatches of fabric used in Interiors.

REFERENCE:
6. Wingate(1964) ”Textiles fabrics and their selection” fifth edition PrentceHall,Inc,USA
Semester-II  
Textiles and Clothing  

Paper IV  
THE TEXTILE INDUSTRY IN INDIA  

Code: HSTC-204  
Total Marks: 100  
Hours: 52  
Theory: 70  
Instruction hrs/week: 03  
Internal Assessment: 30  

Objectives:  
To enable students to-  
➢ Acquire knowledge about the textile industry  
➢ Understand the textile trade in India  

Unit: I  
06hrs  
➢ Introduction to textiles industry- History structures, Contribution to economic development of the country,  
➢ Government role in promotion of textiles industry in India.  
➢ Current textiles business environment in India.  

Unit: II  
10hrs  
➢ Growth, origin and development of various textiles sectors in India- Cotton, Jute, Silk, Wool, Man made textiles, Current status, problems and prospects.  
➢ Development and potential of handloom, powerloom, Khadi and Readymade garment Industry.  

Unit: III  
10 hrs  
➢ National Textiles policy, Changes in focus, regulatory mechanisms and futuristic trends,  
➢ Govt role in promoting-Power loom sector, Handloom sector, Khadi sector, 5 year plans  

Unit: IV  
10 hrs  
An over view of the allied sectors- Dyes, Paper, Coir, Machinery, Chemicals and petrochemicals.  

Unit: V  
06hrs  
Organization helping textiles industry- public and private sector  

Unit: VI  
10hrs  
Globalization and competitiveness- Foreign policies and its impact on the Indian textiles Industry  

REFERENCES:  

Journals
1. Asian Textile Journal
3. Textile Magazine

Semester-II
Textiles and Clothing

Paper V - A
SOFT CORE - CAD IN TEXTILES AND FASHION

Code: HSTC-205A
Total Marks: 100
Hours: 48
Theory: 70
Instruction hrs/week: 03
Internal Assessment: 30

Objectives:
➢ To enable students to understand the basic concepts in Computer Aided Design
➢ To gain knowledge in the application of CAD technique

Unit: I
05hrs
Introduction to Computer aided design and its application in various fields of textiles

Unit: II
08hrs
Concept and Application of CAD, Fundamentals of CAD design process.

Unit: III
10hrs
Application of computer in fashion, Fashion designing, Fashion sketching, Computer graphics.

Unit: IV
10hrs

Unit: V
10hrs
Computer application in pattern making, Grading, Duplication, Market efficiency.

Unit: VI
05hrs
Computer concepts in integrated manufacturing (CIM) to the garment industry. Importance of Enterprises resources and E trade.

REFERENCES:
1. Mano M.M (1972): Computer logic design, Prentice Hall India
3. Journals published by CSI
Semester-II  
Textiles and Clothing  

Paper V - B  
SOFT CORE -FASHION MARKETING

Code: HSTC-205B  
Total Marks: 100

Hours:  48
Theory:  70
Instruction hrs/week: 03
Internal Assessment: 30

OBJECTIVES:

➢ This course will focus to gain knowledge on working of fashion industry.
➢ To learn about fashion marketing

Unit: I  
➢ The dynamics of Fashion, Global context
➢ An over view of the Fashion scenario in the 20th century.
06hrs

Unit: II  
➢ Fashion Marketing - need, meaning, definition, Fashion adoption Theories
➢ Fashion product development, types of producers
➢ pricing-types, objectives, factors effecting Pricing, price cycle,
06hrs

Unit: III: Fashion Retailing - Definition, types, Retail environment  
10hrs

Unit IV: Fashion promotion - Advertizing, buyers & sellers meet, Fashion shows  
10hrs

Unit: V  
Visual merchandizing - Plans & schedules, seasons, holidays, promotion, sales themes.  
10hrs

Unit VI: Types of display - window & interior, elements of display  
06hrs

REFERENCES:
Government of Karnataka
Department of Collegiate Education

Smt. VHD  Central Institute of Home Science
Seshadri Road, Bangalore 560 001

2 Years Post Graduate Program in Home science
2014-2015

Extension Education and Communication
### I semester of Post Graduate Programme in Extension Education and Communication

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Total credits per semester | 26

**Note:** Non Home Science Candidates will have to complete foundation course as per Departmental norms
## II semester of Post Graduate Programme in Extension Education and Communication

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**Total Credits per semester** 26
FOUNDATION COURSE

INTRODUCTION TO EXTENSION EDUCATION AND COMMUNICATION

THEORY

Code: FC-EEC
Total marks : 100
Hours : 52
Theory : 80
Periods/week : 04
Continuous evaluation : 20

PAPER OUTLINE:
This course provides an overview of extension education and communication and introduces the learners to the different dimensions of it.

TOPICS:

UNIT-1  Concept of extension education
Meaning, objectives, scope, philosophy and principles of extension education
Extension education process
Characteristics, concept, importance and motivation in extension education, difference between extension education and formal education, history of extension education.

Teaching and learning process
Definitions, principles and elements of teaching, types of learning, factors influencing learning process.
Behavioral changes
Technology adoption – stages of adoption process, characteristics of adopter categories, barriers to the flow of ideas in a social system.

UNIT-2  Communication process in development
Concept of communication and development
Communication process – elements and patterns of communication, principles of communication, barriers in communication, types of communication, channels and models of communication.

UNIT-3  Extension education for social security
Introduction, definition, concept and objectives of social security, strategies for providing social security, Aspects and benefits, organization and management functions in social security.

UNIT-4  Public health nutrition and management for Extension Education
Introduction and definition to Public health nutrition
Identification of key Public health problems
Approaches to Public health and epidemiology
Introduction and definition to Public health management
Health and development indices
Health needs and problems
Health care services.

UNIT-5  Extension administration and training
Concept of administration
Public and private administration
Personnel administration
Organization – meaning, concepts.
Training – meaning, importance, need, strategies and approaches.
UNIT- 6  Project management  8 Hours
Meaning and definition of project and project management
Systems and process, characteristics of a project, conceptual framework
Monitoring – concept importance, purpose, steps
Evaluation – concept importance, purpose, types.

PRACTICALS :
FC – EEC       OO1 P  Total Marks :50
Number Of Weeks : 13  Continuous Evaluation - 10
Hours Per Week : 04  Practical Examination - 40

1. Conduct an extension education programme in the community using different types of communication.
2. Plan and organize a work shop.
3. Study a social security programme in operation, sponsored by any agency.
4. Assess the nutrition knowledge and conduct a nutrition education programme in the community.
5. Visit an organization and study the administrative set up.
6. Conduct a project and using monitoring and evaluation tools identify qualitative and quantitative indicators of the project.

REFERENCES :

Semester-I
EXTENSION EDUCATION AND COMMUNICATION

Paper- I
EXTENSION MANAGEMENT

Code : HSEEC-101  Total marks: 100
Total hours/week : 52 hrs  Theory: 70
Instruction hour/ Week : 04 hrs  Internal Assessment: 30

Objectives:
- Understand the concepts and process of management.
- Know the importance of management for achieving organizational goals.
- Apply the principles of management to the management of extension organizations/services.
Unit-I  Hrs: 10

**Concept of Extension Management**

- Definition, nature, process and need
- Models and principles of extension management.

Unit-II  Hrs: 20

**Steps in Extension Management:**

- Coordination – meaning, objectives, linkage mechanisms.
- Staffing – meaning, manpower planning, selection – training and development needs-methods-performance appraisal, organizational conflict and conflict resolution, grievance handling.
- Controlling – meaning and process of control – Management Control Techniques – budgetary and non-budgetary control – modern techniques – PERT, CPM, requirements for effective control system.
- Monitoring and evaluation – meaning, purpose and differences. Types of evaluation, steps in evaluation, efficiency cum performance audit, reporting.

Unit-III  Hrs: 06

**Personal Management**

- Recruitment of extension workers
- Classification of positions.

Unit-IV  Hrs: 10

**Efficiency of Personnel**

- Orientation to new workers
- Training of the workers
- Stimulus and incentives
• Code of ethics
• Supervision
• Appreciation

Unit-V

Qualities of a good extension manager

PRACTICAL

Code-HEEC 101P
Total Marks: 50
No. of Weeks- 13
Practical Exam: 35
Hours /Week- 04
Internal Assessment: 15

Unit- I: Plan a program for the community.
Unit- II: Coordinate, delegate and organize the planned programme.
Unit- III: Implement the programme.
Unit- IV: Monitor and evaluate the same.

REFERENCES:

Semester-I
EXTENSION EDUCATION AND COMMUNICATION SPECIALIZATION

Paper -II
PUBLIC HEALTH MANAGEMENT

Code : HSEEC-102
Total marks: 100
Total hours/week :52 hrs
Theory: 70
Instruction hour/ Week : 04 hrs
Internal Assessment: 30

Objectives:
• To realize the health problems of the community and the scientific intervention.
• To understand the concept of health and health indices popularly used.
• To know the supportive services, programmes, and management information systems.
UNIT-I

Public Health Management:
- Definition and concept of Public Health Management.
- Health Development
- Health rights.
- Declaration of Alma Ata
- Millennium Development Goals
- Public Health Policies.
- Health Team Concept
- Health System
- Levels of Health Care
  a) Primary Health Care
  b) Secondary Health Care
  c) Tertiary health care
- Health Services Research

UNIT-II

Health Needs and Problems
- Nutrition
- Hygiene and Sanitation
- Environment-Safe Water, Pollution Control and Waste Disposal.

Unit –III

Indicators of Health:
- Definition & Characteristics of Indicators
- Health indices
  a) Mortality Indicators
  b) Morbidity Indicators
  c) Disability Rates
  d) Nutritional Status Indicators
  e) Health Care delivery Indicators
  f) Utilization rates
  g) Indicators of social and mental health
  h) Environmental Indicators
  i) Socio Economic Indicators
  j) Health Policy Indicators
  k) Indicators of quality of life
  l) Other Indicators
UNIT-IV  Hrs:12

Health Care Services:

- Health administrative set up
- Peripheral state.
- National.
- Urban and Rural.
- State, National and International agencies.
- Role of Government agencies and NGOs in national health programmes
- Child Survival and safe motherhood.
- Reproductive and child health programmes.
- Intersectoral co-ordination in health and development.
- Health Education

UNIT-V  Hrs :12

Management Information System in Health:

- Basic Epidemiology.
- Surveillance.
- Immunization
- Health Screening.
- Health Checkups.
- Health Regulations.
- Census.
- Sample registration system.
- National Family Health Surveys.
- Evaluation of Health Services.
- Health System Research.
- Health Data Base.

PRACTICAL

Code-HEEC 102 P  Total Marks: 50
No. of Weeks- 13  Practical Exam: 35
Hours /Week- 4  Internal Assessment: 15

Unit I: Access health programmes and conducts an awareness programme.

Unit II: Conduct a study on Nutritional assessment of a selected target group by using
     Public Health Nutrition Cycle:
     o Identify key nutrition related problem
OBJECTIVES

- Define objectives.
- Create quantitative targets.
- Develop programme.
- Implement Programme.
- Evaluate Programme.

Unit III: Write the report of the above study with implications for policy development and implementation.

Unit IV: Report writing on visit to public Health Centre or visit to a Hospital to know about Management Information System.

REFERENCES:

UNIT I

Fundamentals of Environment
- Environment: Definition, components, scope of environmental studies
- Environmental hazards and risks
- Natural resources – conservation and sustainable development

UNIT II

Eco-System and the Individual
- Eco-Systems of the world
- Pathways in eco-system
- Environment implications of energy use
- Factors affecting changes in eco-system and environment (socio, economic, cultural and geographic)

UNIT III

Pollution and environment with reference to air, water, soil, noise and radiation
- Sources of pollution
- Effects of pollution
- Remedies to control pollution

UNIT IV

Environment Management
- Waste management, Types of waste, Methods of waste management
- Water pollution and treatment of water
- Solid waste management
- Air pollution control technologies
- Environment conservation and alternative technology

UNIT V

Environmental control measurement
- Environmental legislation
- Environmental policies
- Human rights issues relating to environment
- Environmental movements
- Environmental ethics
- Women and Environment
- Disaster management mitigation
- Role of local municipal authorities, government agencies in promoting better health environment
- Environmental Impact Assessment (EIA)
PRACTICALS:

Code-HEEC 103-P Total Marks: 50
No. of Weeks- 13 Practical Exam: 35
Hours /Week- 04 Internal Assessment:15

Unit I: Study and presentation of case studies of Environmentalists.
Unit II: Visit to Karnataka State Pollution Control Board.
Unit-III Environment volunteerism – to generate awareness to youth/children on environmental issues.
Unit-IV Create a database of environment activism

REFERENCES:

3. Dasgupta, Debabrata (2008):”Environmental Awareness and Education”; Updesh Purohit for Agrobios, India
5. Krishnamoorthy, Bala(2005):”Environmental Management”; Asoke K. Ghosh

Semester-I

EXTENSION EDUCATION AND COMMUNICATION SPECIALIZATION

Paper -IV

COMMUNICATION TECHNOLOGIES IN EXTENSION OF SOCIAL SECURITY

Code : HSEEC-104 Total marks: 100
Total hours/week :52 hrs Theory: 70
Instruction hour/ Week : 04 hrs Internal Assessment: 30

OBJECTIVES:

1. Help students understand the importance of communication in communities.
2. Learn about the different project using latest communication methods
3. Understand the impact of modern technology in communication
Unit 1

**Concept of development communication technology**

- Understanding the communication process, and the concept of development communication.
- The communication system
- Use of technology in communication
- Communication technology for developmental projects

Unit 2

**Understanding social investment**

- Communication technology a social investment
- Social investment defined,
- Scope of IT for masses
- issues –infrastructure and services; electronic governance, education; mass campaign;
- Vision- Economic prosperity to all sections of society; Massive opportunities for self-employment; Offers solutions to problems in social sector;
- Strategy- government as an enabler; promote Indian language on internet;

Unit 3

**The use of technology in different social sectors.**

- Technology and infrastructure development
- Rural connectivity
- E- governance
- Wired micro credit/ microfinance/ micro e-commerce
- IT enabled artisan industries
- Health
- Compute training and IT enabled education
- Review of present schemes
- Implementation

Unit 4

**Impact of communication technology**

- Economic impact
- Social impact

Unit 5

**Space technology in socioeconomic development of communities**

- Understanding SATCOM; INSAT
- Major application of INSAT
- EDUSAT programme
  - Special networks
  - On-going educational TV services
  - Training and developmental communication channels
- GRAMSAT programme
- Telemedicine
- Television Satellite news gathering and dissemination
- Radio networking
- Telecommunication
- Mobile satellite services
- Meteorology
- Satellite navigation
- Disaster management support
- Village resource centre

Unit 6

Communication technology in Social Security Provision
- Communication technology for administration of social security
- Utilisation by different stakeholders
- For the user benefit

PRACTICALS

Code-HEEC 103 P
Total Marks: 50
No. of Weeks- 13
Practical Exam: 35
Hours /Week- 04
Internal Assessment:15

Unit I: Visit a unit wherein advanced communication technology is in place
Unit II: Study the impact of any one of communication technology on the end users.
Unit III: develop communication strategies for advocacy campaigns – health environment, education
Unit IV: Develop s programme for GRAMSAT.

REFERENCES
1. Robert Schware,subhash Bhatnagar, Workshop On Information And Communication Technology For Rural Develop; Information And Communication Technology In Development; Sage Publishers;
2. Sood A.D.; Social Investors Guide; CAF India 2001
3. Government of India reports IT department
4. Government of Karnataka reports IT department
SEMESTER I
EXTENSION EDUCATION AND COMMUNICATION SPECIALIZATION

PAPER – V
SOFT CORE - RESEARCH METHODOLOGY & STATISTICS

Code : HSEEC-105
Total marks: 100

Total hours/week : 48 hrs
Instruction hour/ Week : 03 hrs

Instruction hour/ Week : 03 hrs

Total hours/week : 48 hrs
Instruction hour/ Week : 03 hrs

Objectives:
- To understand the significance of research methodology in Home Science research.
- To study the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To be able to appreciate and understand importance of writing scientifically.
- To understand the role of statistics and computer applications in research.
- To apply statistical techniques to research data for analyzing and interpreting data meaningfully.

Unit: I
3 hrs
Introduction to research.
- Nature, Scope and Objectives of research.
- Role of research in Home science discipline.
- Qualities of a research worker.
- Types of research.

Unit: II
10 hrs
Identification of research problem and sampling.
- Sources of research problem.
- Criterion for the selection of research problem.
- Justification.
- Definition of hypothesis, Types of hypothesis.
- Limitation and delimitation of a problem.
- Population and sample.
- Criterion for selecting sampling techniques.
- Probability sampling
- Non probability sampling.

Unit: III
10 hrs
Qualitative Research Methods
- Definition and types of qualitative research
- Methods of data collection.
- Tools of research
- Reliability and validity of data gathering instruments.
- Pilot study

Unit: IV
10 hrs
Scientific writing and dissertation
- Preparation of research proposal
- Presentation of synopsis
- Writing for grants
- Guidelines and procedures involved in writing a research report
- Articles for journals/ Review of articles
Unit: V
1. Classification and tabulation of data.
2. Frequency distribution- Histogram, Frequency polygon, Ogives.
4. Measures of variation- Range, Quartile deviation, Mean deviation and Standard deviation

Unit: VI
1. Testing of hypothesis- Procedure for testing hypothesis
2. Chi-square test.
3. Application of students ` t ` test for small samples.
4. Correlation, Karl Pearson`s coefficient of correlation, Rank correlation.
5. Analysis of variance- one way and two way classification

References-

SEMESTER-II
EXTENSION EDUCATION AND COMMUNICATION SPECIALIZATION

Paper-I
WOMEN AND DEVELOPMENT

Code : HSEEC-201
Total hours/week :52 hrs
Instruction hour/ Week : 04 hrs

Total marks: 100
Theory: 70
Internal Assessment: 30

Objectives:

- To appreciate gender as a socio cultural constraint.
- To understand the concept, need relevance and dimensions of women’s empower.
- To enable students to identify gender disparities, imbalances and problems of women.
- To understand efforts at different levels for empowering women.
- To gain an understanding of legal and other support systems aimed at women’s empowerment.
- To develop gender concerns in students to proactive approach, advocacy, reforms, dissemination, and work for creating a gender just society.
UNIT-I  
Social construction of gender:  
Hrs: 10  

UNIT-II  
Violence against women:  
Hrs: 12  

UNIT-III  
Women and Health:  
Hrs: 10  
Women and Health, Population Control debate, Contraceptive and its impact on women health, reproductive Health, and new technologies.

UNIT-IV  
Policies, programmes towards empowerment:  
Hrs: 10  

UNIT-V  
Women’s movement in India:  
Hrs: 10  
Support systems and women’s movement: women’s movement in India, Activities of the last two decades, Analysis of Practical Gender Needs (PGN) and Strategic Gender Interests (SGI), CHETNA (CHAITANYAA), JAN VIKAS, SEWA MANDIR, MAHILA SAMAKHYA SOCIETY.

PRACTICAL

HSEEC- 201-P  
Total Hours: 50  
No. of Weeks: 13  
Practical Exam: 35  
Hour/ Week: 04  
Internal Assessment: 15  

Unit-I: Visits to women’s organizations.
Unit-II: Interviews with activists in society.
Unit-III: Critical analysis and appraisals of portrayals of gender roles in print and electronic media (group discussions).
Unit-IV: Developing awareness material for gender sensitisation.

REFERENCES


SEMESTER-II
EXTENSION EDUCATION AND COMMUNICATION SPECIALIZATION

Paper-II
MEDIA PLANNING FOR SOCIAL MARKETING

Code: HSEEC-202 Total Marks: 100
Hours: 52 Theory: 70
Instruction Hrs/week: 04 Internal Assessment: 30

Objectives

• To understand the process of social marketing and social advertising and its comparison with commercial and marketing of products and services.
• To understand the modes and approaches to social marketing.
• To identify the steps and considerations involved in media planning for different target groups, media types and issues types.
• To analyse the policy framework of different mass media with respect to social marketing and advertising.
• To study the trends, needs and problems with respect to social advertising on different media types.

UNIT-I
Social Marketing and Advertising
Hrs:10
- Social advertising and commercial advertising – definitions, need, scope.
- Understanding marketing and social marketing: 3P, 4P and 5P models, terms of social marketing and social advertising.
- Similarities and differences between commercial marketing of products and services and social marketing.
- Approaches to social advertising and marketing.
- Social advertising as developmental communication model.

UNIT-II
Media Planning for Social Advertising & Marketing
Hrs:12
- Programme design for social advertising
- Communications and steps in media planning for different target groups, types of issues, choice of media available, communication needs, finance and time considerations, socio-cultural factors and others; choice of media mix.
- Consideration and steps in message design, treatment and presentation for different types of issues and target groups.
- Measuring communication effectiveness: Media research in social advertising, effectiveness, trends and needs.
UNIT-III

Issues in Social Marketing & Advertising
- Variety of issues and problems to be addressed through social marketing and advertising – social, economic, cultural, ecological, human resource development and management, legal, organisational, infrastructure and others.
- Approaches to marketing the issues and problems to different target groups, linear, inter dependency, diffusions, participatory, integrated, etc.

UNIT-IV

Media in Social Marketing & Advertising: Global and Indian Perspective
- Choice of media in social advertising – economic, technical and time consideration, availability, repeat value, exposure, adaptability and others.
- Critical assessment of each medium for different campaign types for different target groups in social marketing.
- Design for social advertising.

UNIT-V

Trends in Social Advertising:
- Analysis of trends in social advertising on different media types for different issues – message type, treatment, presentation, media mix, repeat value of messages.
- Media for Fund raising.
- Creating a brand.
- Social advertising research.

PRACTICALS

HSEEC- 202 P
No. of Weeks: 13
Hour/ Week: 04
Total Hours: 50
Practical Exam: 35
Internal Assessment: 15

Unit-I: Collect samples of social and commercial advertisement and study the differences and similarities in terms of strategy, appeal, content treatment.

Unit-II: To research, plan and execute a media campaign for any current issue. Define goals, target audience and fund raising.

Unit-III: Study the media use of some of the ongoing social campaigns and prepare the strategy for the campaign.

Unit-IV: Study the trends in social advertising on different mass media in terms of issues covered repeat value, content, presentation and target group addressed.

Unit-V: Using CAD develop a window film on any issues of your choice/message.

REFERENCES


SEMESTER-II
EXTENSION EDUCATION AND COMMUNICATION SPECIALIZATION

Paper-III
DEVELOPMENT COMMUNICATION

Code: HSEEC-203          Total Marks: 100
Hours: 52                Theory: 70
Instruction Hrs/week: 04 Internal Assessment: 30

OBJECTIVES

- To understand the concept of development and communication and their relationship with development communication
- To understand the concept of development communication and its relevance to fostering development
- To impart knowledge about the processes involved in development communication with special emphasis on design of communication strategy
- To impart skill and knowledge about the relevance, potential and use of various media in development communication with due consideration to government policies and regulations
UNIT I  
**Hrs:12**

- Basic Concept: Development  
  Definitions, basic concept, nature, evolution, significance, functions, dynamics of development  
- Basic concept: Communication  
  Meaning, definition, evolution and growth of communication, process of communication, functions, essentials of good communication and its objectives, importance

UNIT II  
**Hrs:10**

- Basic concept of development communication  
- Definition, evolution with respect to historical and cultural perspectives of development communication; nature, role and significance of development communication; inter-relationship between development, communication and development communication

UNIT III  
**Hrs:12**

Models of Development:

- Three perspectives or ways of thinking about and practicing development – modernisation, critical perspective, liberation and monastic perspectives.  
- Theories or paradigms of development: unilinear and non-unilinear world view of development.  
- Models: economic growth, social equity, participatory

UNIT IV  
**Hrs:10**

Models of development communication:

- Interdependent model, dependency model, basic needs model  
- New paradigm of development – modernisation, dependency, multiplicity, one world, multiple culture.  
- Approaches to development communication – diffusion and extension approach.  
- Strategies in development communication

UNIT V  
**Hrs:08**

Media in Development Communication:

- Role of media in development communication.  
- Use of folk media, puppetry, exhibitions, theatre, posters, print media, radio, television, cinema and new trends in media.  
- Government policies and regulations on mass media in India.

REFERENCES

1. Ahuja B.N. and S.S. Chhabra(2006):"Development Communication"; Surjeet publications, Delhi-110007  
3. Chauhan, Jitendra(2006):”Communication and Extension Management”; Anjali Prakashan, Kanpur

Semester-II
EXTENSION EDUCATION AND COMMUNICATION
Paper – IV
MANAGERIAL SKILLS FOR EXTENSION PROFESSIONALS

Code: HSEEC-204
Total Marks: 100
Hours: 52
Theory: 70
Instruction hrs/week: 04
Internal Assessment: 30

OBJECTIVE

• To develop expertise on management problems of extension organizations and learn techniques of management in extension organizations.

Theory

UNIT I
Hrs:13
Conceptualization of management process and its major functions; Management problems in extension organizations; Managerial skill1 - Nature and importance for extension professionals; Skills in effective management of extension and rural development organizations.

UNIT II
Hrs:13
Strategic planning: importance, steps and techniques involved; Management by objective as applicable to extension organizations; Techniques of Transactional Analysis for improving interpersonal communication.

UNIT III
Hrs:13
Creative problem solving techniques; Stress management practices; Total Quality Management (TQM); Concept of learning organization to improve extension services at various levels; Time management practices; Development of Management Information System for extension organization at various levels.

UNIT IV
Hrs:13
Work motivation Organizational climate; Resource management: concept and methods; Team building: process and strategies at organizational and village levels. Mobilization and empowerment skills: concept and strategies in mobilization, concretisation and empowerment of rural people.
REFERENCES:


SEMESTER-II
EXTENSION EDUCATION AND COMMUNICATION SPECIALIZATION

SOFT CORE SUBJECT
DEVELOPMENT OF AUDIO VISUAL TECHNIQUES

Code: HSEEC-205
Total Marks: 100
Hours: 48
Theory: 70
Instruction Hrs/week: 03
Internal Assessment: 30

OBJECTIVES

- To give and take ideas which blend into mutual understanding of learning
- To learn the art of communication and training for it
- To plan and prepare indigenous audio visual aids effective for both urban and rural areas.

UNIT I

Communication and Training

- Communication channels
- Communicator – communicatee relationship
- Communication approaches – communication and extension approaches; individual, group and mass approach
- Role of motivation in the teaching learning process
- Training – need, types of training for extension, principles, nature, goals of training – self development, action learning, transformation and organisational development, enhancing organisational effectiveness, team spirit, capacity building

UNIT II

Audio visual aids

- Meaning, classification of audio visual aids and their scope
- Advantages and disadvantages, importance of audio visual aids in communication
UNIT III Hrs:12

Planning and preparation of audio visual aids

- Charts, posters, graphs, flash cards, flannel graph, drawing, chalkboard, pictures, bulletin boards, maps, demonstration, communication through written words – art of writing, scriptwriting, leaflets, pamphlets, folders, booklets, circular letters and hand bills

UNIT IV Hrs:08

Exhibits, Displays and Dramatic Expressions

- Exhibits and Displays – preparing an exhibit or display, evaluation
- Exhibits and Display – Museums, public museums, school museums
- Dramatic expression – role play, socio and psycho drama, acting out stories, puppets, street play and shadow play, music and dance, infotainment

UNIT V Hrs:06

Projected audio visual aids

- Slides, film strips, overhead projector, motion pictures and television, computer
- Effective use of audio visual aids in rural and urban areas
- Media convergence
Government of Karnataka
Department of Collegiate Education

Smt. VHD  Central Institute of Home Science
Seshadri Road, Bangalore 560 001

2 Years Post Graduate Program in Home science
2014-2015

Early Childhood Education and Administration Program
### I semester of Post Graduate Programme in Early Childhood Education and Administration

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**Note:** Non Home Science Candidates will have to complete foundation course as per Departmental norms
### II semester of Post Graduate Programme in Early Childhood Education and Administration

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**Total Credits per semester**  26
Semester I

FOUNDATION COURSE
INTRODUCTION TO HUMAN DEVELOPMENT

THEORY

Code: FC-HD 001  Total Marks: 100
Hours: 52  Theory: 70
Periods/week: 04  Internal Assessment: 30

PAPER OUTLINE:

This Course provides an overview of Human Development. It introduces to the learners the different dimensions of development from 0-8 years namely-physical, motor, cognitive, language and socio-emotional.

TOPICS:

Unit-1  8 Hours
Introduction to Human Development-
Definitions; need for study with focus on 0-8 years.
Nature, context and interrelationship between various developments.
Individual differences in development.

Unit-2  12 Hours

Unit-3  12 Hours
Physical and Motor Development:
- New born-Physical appearance, sensory capacities and adjustment, importance of breast feeding for optimum growth and Development.
- Changes in size, shape, muscles, bones and brain as development continues through infancy and early childhood.
- Interrelationship between physical and motor development – Factors influencing maturation, nutrition, monitoring and health care, stimulation.
- Motor Development- reflexes in infancy; Major milestones.

Unit-4  10 Hours
Cognitive Development
- Concept of Intelligence
- Every day cognition; perception, memory, concept formation, creativity, imagination, productive thinking and reasoning.
Language Development

- Functions of language
- Stages in language development
- Milestones - one or two word utterances; early sentences; telegraphic speech; understanding metaphors, similes, irony, reflecting on superficial and deeper level meanings of sentences.
- Factors influencing language development.

Unit-5  
6 Hours
Socio-Emotional Development
Social Development:

- Socialization as an important part of the process of becoming a social being.
- Social milestones: Beginning with emergence of social smiles; attachment, separation, anxiety, acquiring sex roles in childhood, social isolation and consequences in later years.
- Factors influencing social development.

Emotional Development

- Basic emotions (Joy, fear, jealousy, anger, sadness, aggression)
- Components and characteristics of emotions
- Milestones in Emotional development
- Factors influencing emotional development.

Unit-6  
4 Hours
Habit formation and behaviour problems:

- Definition and importance of Habit formation
- Habits related to routine-Eating, sleeping and toilet training
- Factors to be considered in Habit formation
- Common behavioural problems-Bed wetting, thumb sucking, nails biting, temper tantrums.

PRACTICALS

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<tr>
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<td>Internal Assessment :15</td>
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<tr>
<td>Hours Per Week: 04</td>
<td>Practical Exam : 35</td>
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1. **Assignment:** Interview pregnant women from two different socio-economic groups on the care taken by them towards the pregnancy. Compare and contrast their responses and make a presentation of your findings to the class.

2. **Exercise:** Report a case study of a child’s physical and motor development.

3. **Activity:** Document and present the pattern of language development from birth to eight years of age.

4. **Exercise:** Observe the socialization pattern of children in a nursery set up and present your findings to the class.
REFERENCES:


Semester I
Early Childhood Education and Administration Course

Paper- I
Theoretical Perspectives on Development in Early Years

Code: HSECEA-101 Total Marks: 100
Hours: 52 Theory: 70
Instruction hrs/week: 04 Internal Assessment: 30

OBJECTIVES:

The course will enable students to

- understand the different perspectives of developmental theorists
- gain in depth familiarity with selected theories of development and to articulate the commonalities as well as underlying differences among the theories.
- understand the nature and construction of theories and also to develop a personal viewpoint about the theories.

Unit-1
Introduction to Child development theorists
- Theoretical approach
- Principles of the theory
- Theorists
- Use of theories

10 Hours

Unit-2
Emotional, Psychological and cognitive development
- Sigmund Freud
- Anna freud
- Erik Erikson
- John Bowlby
- Mary Ainsworth
- Jean Piaget
- Lev Vygotsky

12 Hours

10 Hours
Unit-3
Physical and language development
  ➢ Arnold Gesell
  ➢ Lev Vygotsky
  ➢ BF Skinner, John Watson and Albert Bandura
  ➢ Noam Chomsky
8 Hours

Unit-4
Social development
  ➢ Uri Bronfenbrenner
  ➢ Lev Vygotsky
12 Hours

Unit-5
Social play
  ➢ Jean Piaget and Sara Smilansky
  ➢ Sara Smilansky
  ➢ Mildred Parten
  ➢ Kenneth H. Rubin
  ➢ Jerome Singer
Development of autonomy and independence

PRACTICALS

HSECEA- 101-P Total Marks: 50
Number of weeks-13 Internal Assessment: 15
Hours per week: 04 Practical Exam: 35

1. Document children’s play and correlate it to the theories of social development and play. Make a classroom presentation of the same.
2. Make a documentary of language development in early years.
3. Compare and contrast Piaget and Vygotsky theories of child development and make a classroom presentation of the same.
4. Compare and contrast nature VS nurture theory with supportive research studies. Make a classroom presentation of the same.

REFERENCES:

Semester I
Early Childhood Education and Administration

Paper - II
Brain Development and Importance of Early Stimulation

Code: HSECEA-102
Total Marks: 100
Hours: 52
Theory: 70
Instruction hrs/week: 04
Internal Assessment: 30

OBJECTIVES:

The course will enable students to

- understand brain development and critical periods of brain development
- appreciate the importance of early stimulation
- study the effects of early experiences on brain development

Unit-1  12 Hours

- Brain development - construction of the brain, development of the neurons, cerebral cortex, brain growth spurts
- Functioning of the brain – laterality, Plasticity
- Critical Periods of Brain development
- Important influences on brain development before birth - Nature Vs Nurture

Unit-2  8 Hours

- Early stimulation – Meaning, Definition and concept
- Stimulation and brain development
- Benefits of early childhood nutrition for brain development

Unit-3  6 Hours

- Early intervention and the relevance of critical periods. Development hazards with relevance to developmental task collapses.

Unit-4  12 Hours

- Pre natal stimulation and infant stimulation
- Developing cognitive functions for intellectual growth
  - Cognitive stimulation and home environment.
  - Cognitive Stimulation and preschool learning program

Unit-5  14 Hours

- Effect of early experiences on the brain
- Conditions and substances that affect the developing brain
  - Infectious diseases
  - Stress and the developing brain
  - Neural tube defects
PRACTICALS

HSECEA- 102 P                                                                
Number of weeks-  13                                                         Total Marks: 50
Hours per week -4                                                             Internal Assessment: 15
Practical Exam :  35                                                          Practical:  35

1. Organise a workshop on early stimulation for parents of young children.
2. Document different developments of young children. Make a comparison of children -
   advantaged and disadvantaged, in terms of receiving stimulation.
3. Critically examine any two books on early stimulation and present a three page report.
4. Organize a lecture on “Brain Development” by a subject expert and report the same.

REFERENCES:
2. Bowman T. Barbara, Donovan, Suzanne and Burns. M. Susan; (2000) Eager to Learn: 
   Educating our preschoolers, Committee on early childhood pedagogy, national research 
   council.
   years of life, NY.

Semester I                                                                
Early Childhood Education and Administration

Paper – III                                                                 
Social and Educational Perspectives on Early Childhood Care and Education

Code:HSECEA-103                                                             Total Marks: 100
Hours:  52                                                                 Theory:  70
Instruction hrs/week: 04                                                    Internal Assessment:  30

OBJECTIVES:
The course will enable students to
➢ understand the need and significance of early childhood care and education
➢ understand the policy perspectives on ECCE in India and world
➢ understand psycho-social development of children
➢ understand the quality dimensions of pre-school
➢ develop knowledge and skills for research and evaluation in ECCE

Unit-1                                                                
10 Hours
Policy and Perspectives in early childhood care and education
➢ Concept, significance and objectives of ECCE.
➢ ECCE in India: Policies and Programmes in
• National Policy on Education –(1986)
• National Plan of Action for Children, (1992 and 2005);
• Draft national early childhood care and education (ecce) policy (2012)

ECCE in Global Perspective:
• United Nations Convention on Rights of the Child (UNCRC, 1989),
• Millennium Development Goals (2000) and

Unit-2  10 Hours
Psycho – Social Context of Pre-school Education
➢ Developmental characteristics and norms – physical, cognitive, language, socio-emotional during early years.
➢ home to school transition– issues and concerns.
➢ Socio-cultural context in child rearing practices at home and schools in construction of knowledge.

Unit-3  10 Hours
Curriculum for Pre-school Education
➢ School Readiness Curriculum – physical, cognitive, socio-emotional dimensions;
  • characteristics of learning experiences and approaches
➢ Different types of preschool curriculum (Example- Montessori, Kindergarten, Balawadi etc.)

Unit-4  12 Hours
Approaches/ Resources for early childhood programs
➢ Characteristics and rationale of programmes for different settings
➢ General principles to curricular approaches –
  • activity based play-way, child-centred, theme-based, holistic, joyful, inclusive – meaning, rationale and practical implications in specific contexts;
  • story-telling, puppetry, musical and rhythmic exercises, dramatization, role-play, art activities, indoor and outdoor play, field trips and explorations as methods in primary and early primary stages –
  • Transaction methods-meaning, rationale, selection criteria,
  • Local specific community resources – human and material & their integration in curricular activities;
  • preparation & use of learning and play materials – principles and characteristics;
  • community involvement in effective implementation of ECCE programmes

Unit - 5  10 Hours
➢ Training, Research & Evaluation in ECCE
  • Need and significance of personnel involved in ECCE programme.
  • Status & nature of training programmes – pre-service & in-service for personnel involved in ECCE programmes – a critical evaluation, issues, concerns and problems.
Areas of research studies in ECCE.
- Evaluation of ECCE programmes, methodology and implications.

**PRACTICALS**

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<th>HSECEA- 103-P</th>
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<td>Internal Assessment: 15</td>
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<tr>
<td>Hours per week: 04</td>
<td>Practical Exam: 35</td>
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</table>

1. Carry out a case study of a Government and private pre-school centre and report the same in the classroom.

2. Carry out a survey of child rearing practices in different cultures.

3. Identify an issue in early childhood care and education and write a journal article.

4. Identify case studies of children and carry out a group discussion. Report the same formally in the classroom.

**REFERENCES:**


4. National early childhood care and education (ecce) policy (Draft), Ministry of women and child development, government of India.


Semester I
Early Childhood Education and Administration

Paper - IV
Organisation Development Skills-1 Leadership

Code: HSECEA 104 Total Marks: 100
Hours: 52 Theory: 70
Instruction hrs/week: 04 Internal Assessment: 30

OBJECTIVES:

The paper will enable the student to

- learn the qualities of leadership
- develop the attributes and skills that enhance their leadership abilities.
- learn the importance of group dynamics and emotional quotient for developing leadership skills.

Unit-1
Leadership
- Leader- Concept and definition.
- Theories- trait, behavioural, contingency/ situational.
- Qualities- Charismatic, transformational and ethical leadership; trust and leadership.
- Types of leaders.

Unit-2
14 Hours
Personal Growth
Self-awareness, self-management; Developing motivation: collaboration, achievement, conflict management, decision making, team effectiveness; Assertiveness; Presentation skills; Stress management; Lateral thinking/ creativity; Persuasion/ negotiation skills; Trust building; Coaching and mentoring skills.
Unit-3
Effective Communication
➢ Communication process: Intra and inter personal communication, communication styles, listening skills, nonverbal communication, overcoming barriers of communication at work place, conflict management, building relationships, organizational communication written communication.

Unit-4
➢ Group Dynamics and Emotional Quotient at Work
➢ Motivation: theories and applications;
➢ Human resourcefulness, skills and competencies
➢ Transactional analysis: ego states, types of transaction, games;
➢ Group behaviour: group development, group decision making
➢ Models of emotional intelligence: ability based model, personality based model, performance based model, mixed model
➢ Application of EI in work and personal life.

Unit-5
➢ Leadership and globalisation.

PRACTICALS

HSECEA- 104 P
Total Marks: 50
Number of weeks- 13
Internal Assessment: 15
Hours per week – 4
Practical Exam : 35

1. Assignment: Compare and contrast how various cultures see a leader.

2. Classroom Activity: Identifying a leader through quizzes/questions/scales/checklist, determine if you are a leader, and if you are, what kind of a leader.

3. Presentation/ reporting: Interact with/Interview two leaders- a servant leader and a corporate leader. Analyze and make a presentation of your findings.


REFERENCES:

2. Covey Steven,( 1989) The Seven Habits of Highly Effective People , Simon and Schuster,
4. "Leaders and Supervision", Scarra & Dorsey, Delmar Publishing
OBJECTIVES:
The course will enable students to
- describe the nature, purpose, scope, areas, and types of research in education.
- explain the characteristics of quantitative, qualitative and mixed research.
- select and explain the method appropriate for a research study
- conduct a literature search and develop a research proposal
- explain a sampling design appropriate for a research study
- elucidate tool, design and procedure for collection of data
- explain the importance of documentation and dissemination of researches in education.

Unit I
Research in Education: Conceptual Issues
- Meaning, purpose and areas of educational research
- Kinds of educational research: basic & applied research, evaluation research and action research, and their characteristics
- Source of knowledge, The scientific approach to the knowledge generation: basic assumptions of science, scientific methods, Theory, nature and functions, The principle of evidence
- Research paradigms in education: qualitative, mixed and, quantitative, and their characteristics, Types of research under each paradigm
- Planning the research study: Sources of research problems, Review of the literature-purpose and resources; conducting the literature search: using databases and internet, internet search tools and quality of internet resources
- Identification and Conceptualisation of Research Problem: statement of problem, purpose, and research questions in qualitative and quantitative research
- Formulation of Hypotheses
- Preparation of a Research Proposal: Framework of the research proposal and strategies for writing the research proposals

Unit II
Quantitative Methods of Research
- Experimental Research
  - Nature of experimental research, Variables in experimental research - independent, dependent and confounding variables; ways to manipulate an independent variable, purpose and methods of control of confounding variables
• Quasi-Experimental Designs: Nonequivalent Comparison Group Design, and Time-Series Design
• Internal and external validity of results in experimental research
  ➢ Non-Experimental Research
• Steps in Non-Experimental Research
• Simple cases of Casual-Comparative and Correlational research; necessary conditions for causation
• Techniques of control: matching, holding the extraneous variable constant and statistical control
• Classification by Time: Cross-sectional, Longitudinal (Trend and Panel studies), and Retrospective; and classification by research objectives-Descriptive, Predictive and Explanatory

Unit III.  8 Hours
Qualitative Methods of Research
  ➢ Qualitative Research: meaning, steps and characteristics
  ➢ Qualitative research approaches-Phenomenology, Ethnography, Case studies and Grounded theory-characteristics, types, data collection, analysis and report writing
  ➢ Historical Research-meaning, significance, steps, primary and secondary sources of information, external and internal criticism of the source
  ➢ Mixed Research-meaning, fundamentals principles, strength and weaknesses, types and, limitations

Unit IV  10 Hours
Sampling in Qualitative, Quantitative and Mixed Research
  ➢ Concept of population and its type, and sample, sampling unit, sampling frame, sample size, sampling error, representative and biased samples
  ➢ Random Sampling Techniques: simple random sampling, systematic sampling, stratified random sampling, cluster sampling, and multi-stage sampling
  ➢ Non-Random Sampling Techniques, convenience sampling, purposive sampling, quota sampling and snowball sampling
  ➢ Determining the sample size when using random sampling
  ➢ Sampling in qualitative and mixed research

Unit V  10 Hours
Methods of Data Collection
• Tests, Inventories and scales: types and their construction and uses, Identifying a tool using reliability and validity information
• Questionnaire: forms, principles of construction and their scope in educational research, administration of questionnaires
• Interview: types, characteristics and applicability, guidelines for conducting interviews
• Qualitative and quantitative observation: use of the checklist and schedules, time sampling, field notes, role of researcher during observation, focus group discussion
• Secondary (existing) data: sources
REFERENCES:
OBJECTIVES:

The course will enable students to

- become conversant with basic assumptions, concepts, and principles of each theory.
- grasp possible implications of each theory for different instructional settings.
- compare and contrast a range of theories in a variety of settings and age groups.
- create, revise, and begin to use their own personal theory of learning.
- reflect on how learning theories impact on every aspect of life.
- explain the interactions of students, teachers, and materials in classrooms and the implications of these interactions for classroom environments.
- compare and contrast major theoretical positions on learning
- describe contemporary learners along a continuum of characteristics, i.e socioeconomic status, ethnicity, gender, ability, among others, and discuss the implications of these characteristics for instruction in the contemporary classroom and in the future.

Unit-1

12 Hours

Paradigms

- Behaviourism
- Cognitivism
- Constructivism
- Designed Based
- Humanism

Cognitivist Theories

- Cognitivism Overview
- Attribution theory (Weiner)
- Cognitive load theory (Sweller)
- Cognitive theory of multimedia learning (Mayer)
- Elaboration theory (Reigeluth)
- Stage theory of Cognitive Development (Piaget)

Unit-2

12 Hours

Constructivist, Social and Situational theories

- Constructivism Overview
- Cognitive apprenticeship (Collins et al.)
- Communities of practice (Lave and Wenger)
- Discovery Learning (Bruner)
- Social Development theory (Vygotsky)
• Problem Based Learning (PBL)
• Situated Learning (Lave)

Unit-3  
Motivational and Humanist theories
• Humanism Overview
• ARCS Model of Motivational Design (Keller)
• Emotional Intelligence (Goleman)
• Experiential Learning (Kolb)
• Maslow’s Hierarchy of needs (Maslow)
• Self-Determination Theory (Deci and Ryan)

Unit-4  
• Identity Theories
• Erikson’s Stages of Development
• Identity Status Theory (Marcia)
• Self-theories: Entity and incremental theory (Dweck)

Unit-5
➢ Descriptive and Meta Theories
• Activity theory (Vygotsky, Leont’ey, Luria, Engstrom)
• Actor Network Theory (Latour, Callon)
• Bloom’s Taxonomy (Bloom)
• Distributed Cognition (Hutchins)
➢ Miscellaneous Learning Theories and Models
• Affordance Theory (Gibson)
• Multiple Intelligences Theory (Gardner)

REFERENCES:
Semester II
Early Childhood Education and Administration

Paper - II
Foundations of Curriculum

Code: HSECEA-202  Total Marks: 100
Hours: 52  Theory: 70
Instruction hrs/week: 04  Internal Assessment: 30

OBJECTIVES:

The course will enable students to

➢ define curriculum
➢ identify the components of curriculum
➢ describe the various principles of curriculum
➢ explain various determinants of curriculum
➢ describe and analyse various approaches to curriculum,
➢ explain and compare various types of curriculum.

Unit-I
Nature of Curriculum  8 Hours

➢ Meaning and concept of curriculum.
➢ Curriculum as a body of socially organized knowledge, inert and live curriculum.
➢ Components of Curriculum: Objectives, Content, Learning Experiences and Evaluation System.
➢ Base/Foundations of Curriculum (Philosophical-epistemic activism, Social and Psychological).

Unit-II
Principles of Curriculum Construction  12 Hours

➢ Students centered
➢ Activity centered
➢ Community centered
➢ Forward looking principle
➢ Principles of integration
➢ Theories of curriculum development.
➢ Conservative (Preservation of Culture etc.)
➢ Relevance, flexibility, quality, contextuality and plurality

Unit –III
Determinants of Curriculum  12 Hours

➢ Objectives-Values enshrined in the Constitution such as social justice, equality and secularism;
  • Core elements as reflected in the NPE-1986 and POA;
  • Curriculum concerns as reflected in NCFSE-2000 and NCF 2005.
➢ Explosion of knowledge, Information vs. Knowledge, Nurturing creativity in all the areas of Knowledge and its construction by children
➢ Society, social forces, revolutionary change in the society: ICT, change in value system, Localization, Privatization and Globalization.
Learner: growth and development.
Nature of subject matter/content.

Unit –IV

Approaches to Curriculum

- Subject centered
- Learner centered and
- Community centered.
- Curriculum Framework

Unit- V

Type of Curriculum

- Humanistic Curriculum: Characteristics, purpose, role of teacher, Psychological basis of humanistic curriculum
- Social reconstructionist curriculum: characteristics, purpose, role of teacher in reconstructionist curriculum

REFERENCES:


Semester II

Early Childhood Education and Administration

Paper – III

Organization Development skills-2

Administration of Early Childhood Programs

Code: HSECEA 203

Total Marks: 100

Hours: 52
Theory: 70
Instruction hrs/week: 04
Internal Assessment: 30

OBJECTIVES:
The paper will enable the student to understand the

- Administration and organization of an enterprise
- Importance of human resources in an organization
- Concept of finance in the running of an organization
- Fundamentals of marketing
- Importance and need for business communication
Unit-I
Administration and the Organizational Environment

- What is administration?
- The roles, responsibilities and skills of administrators
- Developing administrative skills; managing the administration process
- What is an organization?
- The role of organizations in the business environment; functions and Processes.
- Types of organization: private, public, not-for-profit, voluntary and agency;
- Organisational structure.
- Importance of Total Quality Management in organizations.

Unit-II
Human Resource Systems

- Strategic approach to HRM, HR planning and information systems, equal employment opportunity and managing diversity, job analysis, recruitment, selection, and retention; Strategies for maximizing HR productivity, job design, socialization,
- training and development; Strategies for effective performance appraisal, strategic compensation systems, improving productivity, strategies for maintaining human resources, benefit plans, managing health, safety, and stress, ethics, employee rights, and employer responsibilities; HR Audits.

Unit-III
Financial Management:

- Income and expenditure
- The Balance Sheet
- Assets and liabilities
- Working capital and capital employed
- Constructing Balance Sheets and a Profit and Loss Account
- Using information for planning and control
- Direct and indirect cost
- Fixed, variable and semi-variable costs
- The importance of cost control
- The nature and purpose of budgets and budgetary control
- The difference between a fixed, a flexible and a cash budget
- Constructing simple flexible and cash budgets information for planning and control

Unit-IV
Marketing

- What is a Market?
- The Concept of Customer
- Customer Relationship Management (CRM)
- The Marketing Mix
- Marketing Planning
- ICT’s in Marketing
Unit-V

Business Communication Skills:
- Fundamental models of communication
- Elements of effective organisational communication; barriers to effective communication
- Written and oral communication; listening skills; making presentations
- Use of plain English; technical language; avoidance of slang/colloquialisms
- Business and technical communication; letters, reports, memos, minutes, email
- Meetings; effective preparation, participation and management
- Organisational communication media: costs, benefits, selection decisions;
  the role of the business meeting
- Use of Information and Communication Technology

REFERENCES:
OBJECTIVES:
The paper will enable the student to

- develop an understanding of basic meaning and types of guidance
- develop an understanding of basic meaning and types of counseling
- get acquainted with process and techniques of counseling
- analyze the relationship between guidance and counseling,

Unit-1 12 Hours
Guidance
- Need for Guidance, basic principles of guidance,
- Purpose of guidance: self-understanding, self-discovery, self-reliance, self-direction, self-actualization
- Scope of guidance programme
- Common do's and don'ts in dealing with children

Unit-2 8 Hours
Counseling
- Meaning, Principles and need for counseling
- counseling process

Unit-3 8 Hours
Types of Counseling
- Individual counseling
- Group counseling
- parental counseling,
- family counseling,
- Counseling for children.

Unit-4 12 Hours
- Role, qualities and skills of a counselor
- Professional ethics

Unit-5 12 Hours
- Relationship between counseling, guidance and therapy, Types of therapy – client centered therapy, rational emotive therapy, behavior therapy, Gestalt therapy and psychoanalytical therapy
REFERENCES:


Semester II
Early Childhood Education and Administration

Soft Core – Child Rights

Code: HSECEA 205
Total Marks: 100
Hours: 48
Theory: 70
Instruction hrs/week: 03
Internal Assessment: 30

OBJECTIVES:
The paper will enable the student to

- develop knowledge and skills in rights based perspective to confront diversities and challenges in early childhood
- critically review the status of Early Childhood in India and understand context of rights in early childhood
- comprehend early childhood as critical for the evolving capacities of children and the potential of rights based framework in providing a fair, equitable and a just society
Unit-I  
- Definition and evolution of child rights in India  
- Understanding Child Rights, Introduction to current issues concerning children’s rights

Unit-II  
- Situational Analysis of Children and Childhood in India  
  - Understanding the “big picture” of the child by means of demographic indicators such as infant mortality, maternal mortality, malnutrition, low birth weight and their causes  
- Problems and Issues faced by Children in Certain Selected Sectors in India  
  - Considerations of the impact of discrimination and marginality such as caste, gender, poverty leading to children on streets, children without families, single parent families  
  - Children and childhood in situations of natural, man made disasters and political unrest and its impact on child’s well being.  
  - Rights of children from ethnic groups and the emergence of rights of persons with disabilities and related laws, value of inclusion

Unit-III  
- National Laws and Policies for Children  
  - Programmes, policies and legislations and related Government and NGO initiatives for health, care, nutrition and education in early childhood  
  - Early childhood and provision of institutional care, foster care and adoption as alternate care for destitute and homeless children  
  - Access to services for the care and protection of children in difficult situations such as family migration, HIV/AIDS, emergency due to calamity, war or migration  
  - Inclusive practices and rights of children with special needs for access, barrier free environments and modifications for learning and skill building  
  - Efforts by the state and society (NGO, community, family and school) to improve the rights of the girl child

Unit-IV  
- Statutory and Judicial Institutions- Child Welfare Committee (CWC) and a Juvenile Justice Board (JJB), family courts  
- Working with various legal institutions  
- Orientation to Skills and Strategies of Work with the Legal System

Unit-V  
- Rights based Programming  
  - Monitoring and evaluation of child rights programmes and attempting a situational analysis of the provisions to ensure developmentally appropriate norms and standards,  
  - Significance and provisions for rehabilitation of children out of families for child’s right to consistency and continuity for protection, care and survival  
  - Working with Children in Multidisciplinary settings
Protection of child rights and Advocacy

- Protection of child’s right to participation (responsive environment) and prevention of child abuse, neglect and protection from punishment.
- Prevention of children at work, protecting and promoting child’s right to play, rest and leisure
- Protecting the rights and cultural practices and ethnic identity of minority children
- Role of NGOs in care and protection of the essential features of rights perspective and the agency of the child

REFERENCES:


