

Choice Based Credit System (CBCS)

UNIVERSITY OF DELHI

DEPARTMENT OF HOME SCIENCE

**UNDERGRADUATE PROGRAMME
(Courses effective from Academic Year 2015-16)**



SYLLABUS OF COURSES TO BE OFFERED **Core Courses, Elective Courses & Ability Enhancement Courses**

Disclaimer: The CBCS syllabus is uploaded as given by the Faculty concerned to the Academic Council. The same has been approved as it is by the Academic Council on 13.7.2015 and Executive Council on 14.7.2015. Any query may kindly be addressed to the concerned Faculty.

Undergraduate Programme Secretariat

Preamble

The University Grants Commission (UGC) has initiated several measures to bring equity, efficiency and excellence in the Higher Education System of country. The important measures taken to enhance academic standards and quality in higher education include innovation and improvements in curriculum, teaching-learning process, examination and evaluation systems, besides governance and other matters.

The UGC has formulated various regulations and guidelines from time to time to improve the higher education system and maintain minimum standards and quality across the Higher Educational Institutions (HEIs) in India. The academic reforms recommended by the UGC in the recent past have led to overall improvement in the higher education system. However, due to lot of diversity in the system of higher education, there are multiple approaches followed by universities towards examination, evaluation and grading system. While the HEIs must have the flexibility and freedom in designing the examination and evaluation methods that best fits the curriculum, syllabi and teaching-learning methods, there is a need to devise a sensible system for awarding the grades based on the performance of students. Presently the performance of the students is reported using the conventional system of marks secured in the examinations or grades or both. The conversion from marks to letter grades and the letter grades used vary widely across the HEIs in the country. This creates difficulty for the academia and the employers to understand and infer the performance of the students graduating from different universities and colleges based on grades.

The grading system is considered to be better than the conventional marks system and hence it has been followed in the top institutions in India and abroad. So it is desirable to introduce uniform grading system. This will facilitate student mobility across institutions within and across countries and also enable potential employers to assess the performance of students. To bring in the desired uniformity, in grading system and method for computing the cumulative grade point average (CGPA) based on the performance of students in the examinations, the UGC has formulated these guidelines.

CHOICE BASED CREDIT SYSTEM (CBCS):

The CBCS provides an opportunity for the students to choose courses from the prescribed courses comprising core, elective/minor or skill based courses. The courses can be evaluated following the grading system, which is considered to be better than the conventional marks system. Therefore, it is necessary to introduce uniform grading system in the entire higher education in India. This will benefit the students to move across institutions within India to begin with and across countries. The uniform grading system will also enable potential employers in assessing the performance of the candidates. In order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations, the UGC has formulated the guidelines to be followed.

Outline of Choice Based Credit System:

- 1. Core Course:** A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.
- 2. Elective Course:** Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.
 - 2.1 Discipline Specific Elective (DSE) Course:** Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).
 - 2.2 Dissertation/Project:** An elective course designed to acquire special/advanced knowledge, such as supplement study/support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher/faculty member is called dissertation/project.
 - 2.3 Generic Elective (GE) Course:** An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective.

P.S.: A core course offered in a discipline/subject may be treated as an elective by other discipline/subject and vice versa and such electives may also be referred to as Generic Elective.
- 3. Ability Enhancement Courses (AEC)/Competency Improvement Courses/Skill Development Courses/Foundation Course:** The Ability Enhancement (AE) Courses may be of two kinds: AE Compulsory Course (AECC) and AE Elective Course (AEEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement. They ((i) Environmental Science, (ii) English/MIL Communication) are mandatory for all disciplines. AEEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.
 - 3.1 AE Compulsory Course (AECC):** Environmental Science, English Communication/MIL Communication.
 - 3.2 AE Elective Course (AEEC):** These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based instruction.

Project work/Dissertation is considered as a special course involving application of knowledge in solving / analyzing /exploring a real life situation / difficult problem. A Project/Dissertation work would be of 6 credits. A Project/Dissertation work may be given in lieu of a discipline specific elective paper.

Details of Courses Under Undergraduate Programme (B.Sc.)

Course	*Credits	
=====		
	Theory+ Practical	Theory+Tutorials
<u>I. Core Course</u>	12X4= 48	12X5=60
(12 Papers)		
04 Courses from each of the		
03 disciplines of choice		
Core Course Practical / Tutorial*	12X2=24	12X1=12
(12 Practical/ Tutorials*)		
04 Courses from each of the		
03 Disciplines of choice		
 <u>II. Elective Course</u>	 6x4=24	 6X5=30
(6 Papers)		
Two papers from each discipline of choice		
including paper of interdisciplinary nature.		
Elective Course Practical / Tutorials*	6 X 2=12	6X1=6
(6 Practical / Tutorials*)		
Two Papers from each discipline of choice		
including paper of interdisciplinary nature		
<ul style="list-style-type: none"> • Optional Dissertation or project work in place of one Discipline elective paper (6 credits) in 6th Semester 		
 <u>III. Ability Enhancement Courses</u>		
1. Ability Enhancement Compulsory	2 X 2=4	2X2=4
(2 Papers of 2 credits each)		
Environmental Science		
English/MIL Communication		
2. Ability Enhancement Elective	4 X 2=8	4 X 2=8
(Skill Based)		
(4 Papers of 2 credits each)		
	_____	_____
	Total credit= 120	Total credit= 120

Institute should evolve a system/policy about ECA/ General Interest/Hobby/Sports/NCC/NSS/related courses on its own.

*wherever there is practical there will be no tutorials and vice -versa

CORE COURSES (12 Courses) Total Credits 72

(6 Credits each Theory 4 Credits +Practical 2 Credits =6)

CC1: Communication and Extension Theory 4 Credits +Practical 2 Credit

CC 2: Resource Management Theory 4 Credits +Practical 2 Credit

CC 3: Fashion Studies Theory 4 Credits +Practical 2 Credit

CC 4: Fundamentals of Nutrition and Food Science Theory 4 Credits +Practical 2 Credit

CC 5: Life Span Development I Theory 4 Credits +Practical 2 Credit

CC 6 : Fundamentals of Textiles Theory 4 Credits +Practical 2 Credit

CC 7: Physical Sciences Theory 4 Credits +Practical 2 Credit

CC 8: Life Span Development II Theory 4 Credits +Practical 2 Credit

CC 9: Nutrition for the Family Theory 4 Credits +Practical 2 Credit

CC 10: Life Sciences Theory 4 Credits +Practical 2 Credit

CC 11 : Personal Finance and Consumer Studies Theory 4 Credits +Practical 2 Credit

CC 12 : Communication Systems and Social Change Theory 4 Credits +Practical 2 Credit

DISCIPLINE SPECIFIC ELECTIVE (6 Courses) Total Credits -36

(6 Credits Each – Theory 4 Credits +Practical 2 Credits)

DSE 1A: Nutritional Biochemistry Theory 4 Credits +Practical 2 Credit

DSE-1B: Public Nutrition and Dietetics Theory 4 Credits +Practical 2 Credit

DSE 2A : Children with Disabilities Theory 4 Credits +Practical 2 Credit

DSE 2B : Child Rights and Gender Empowerment Theory 4 Credits +Practical 2 Credit

DSE 3A: Communication for Development Theory 4 Credits +Practical 2 Credit

DSE 3B: Extension Management Theory 4 Credits +Practical 2 Credit

DSE 4A: Processes in Apparel Design Theory 4 Credits +Practical 2 Credit

DSE 4B : Traditional Indian Textiles Theory 4 Credits +Practical 2 Credit

DSE 5A: Entrepreneurship Development Theory 4 Credits +Practical 2 Credit

DSE 5B: Basics of Design Application Theory 4 Credits +Practical 2 Credit

SKILL ENHANCEMENT COURSES (4 Courses) Total Credits – 8

(2 Credits Each Theory 2 Credits or Theory 1 + Practical 1Credit or Practical's 2 Credits)

SEC 1: Sociology of Working with Families and Communities Theory 2 Credit

SEC 2: Understanding Psychology Theory 2 Credit

SEC 3 : Overview of Indian Economy Theory 2 Credit

SEC 4: Human Physiology Theory 2 Credit

SEC 5: Bakery Science Practical 2 Credit

SEC-6: Home Based Catering Theory 2 Credit

SEC 7: Nutrition and Fitness Theory 2 Credit

SEC 8: Early Childhood Care and Education Practical 2 Credit

SEC 9: Adolescents' Relations and Well-Being Practical 2 Credit

SEC 10: Training for Development Practical 2 Credit

SEC 11: Advocacy and Behavior Change Communication Practical 2 Credit

SEC 12: Textile Design Practical 2 Credit

SEC 13: Computer Applications in Fashion Design Practical 2 Credit

SEC 14: Resource Management and Sustainable Development Practical 2 Credit

SEC 15: Autocad and Space Planning Practical 2 Credit

SEC 16: Social Media and Digital Communication Practical 2 Credit

SEC 17: Basics of Design Practical 2 Credit

SEC 18: Computer Applications in Communication and Media Design Practical 2 credits

SEC 19: Information, Education and Communication Material for Development Practical 2 credits

SEC 20: House Keeping Theory 2 credits

SEC 21: Travel and Tourism Theory 2 credits

SEC 22: Nutrition Health Communication Theory 2 credits

SEC 23: Biophysics Theory 2 credits

SEC 24: Life Skills Education Theory 2 credits

SEC 25: Activities and Resources for Child Development – I Practical 2 credits

SEC 26: Activities and Resources for Child Development II Practical 2 credits

SEC 27: Product Development in Textiles and Apparel Practical 2 credits

SEC 28: Image Styling Practical 2 credits

SEC 29: Fashion Illustration Practical 2 credits

SEC 30: NGO Management & CSR Theory 2 credits

Total Credits 72 Core + 36 DSE + 8 SEC + 4 AECC = 120 Credits

CORE COURSES

CORE COURSE 1: COMMUNICATION AND EXTENSION (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Unit 1 Communication: Concepts **18**

- Historical background, concept and nature
- Functions of Communication
- Types of Communication - communication transactions; Formal and informal communication; Verbal and Non-verbal Communication
- Scope of Communication- Education, training and learning industry, Motivation and Management, Corporate Communication, Management of Organizations, Advertising and Public relations
- Communication and mainstream media- newspaper, radio, television and Cinema, ICTs and web based communication
- Communication for social change

Unit 2 Understanding Human Communication **20**

- Culture and communication- Signs, symbols and codes in communication
- Postulates/Principles of Communication
- Elements of Communication and their characteristics
- Models of Communication
- Barriers to Communication

Unit 3 Communicating Effectively **8**

Concept, nature and relevance to communication process:

- Empathy
- Persuasion
- Perception
- Listening

Unit 4 Communication for Extension **14**

- Concept, nature and philosophy of Extension
- Principles of Extension
- Methods and Media of community outreach; Audio-Visual aids- concept, classification, characteristics and scope.
- Relationship between, Communication, Extension and Development

PRACTICAL

- | | | |
|----|---|----------|
| 1. | Developing skills in planning and conducting small group communication. | 3 |
| 2. | Review of media on selected issues | 3 |
| 3. | Design and use of graphic media | 9 |

RECOMMENDED READINGS

- Barker, L. (1990). "Communication", New Jersey: Prentice Hall, Inc; 171.
- Devito, J. (1998) Human Communication. New York: Harper & Row.
- Patri and Patri (2002); Essentials of Communication. Greenspan Publications

CORE COURSE 2: RESOURCE MANAGEMENT (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Unit 1 Introduction to Resource Management

18

- Concept, universality and scope of management
- Approaches to management
- Ethics in management
- Motivation Theory

Unit 2 Resources

20

- Understanding meaning, classification and characteristics of resources, factors affecting utilization of resources.
- Maximizing use of resources and resource conservation.
- Availability and management of specific resources by an individual/ family
 - Money
 - Time
 - Energy
 - Space
- Application of Management Process in:
 - Event Planning & Execution

Unit 3 Functions of Management: An overview

22

- Decision Making
- Planning
- Supervising
- Controlling
- Organizing
- Evaluation

PRACTICAL

1. Resource conservation and optimization/green technologies (natural resources): Portfolio
2. Identification and development of self as a resource.
 - SWOT analysis-who am I and Micro lab
 - Building Decision Making abilities through management games
3. Preparation of time plans for self and family

4. Time and Motion Study
5. Event planning ,management and evaluation-with reference to
 - Managerial process
 - Resource optimization - time, money, products, space, human capital

RECOMMENDED READINGS

- Koontz.H. and O'Donnel C., 2005, Management – A systems and contingency analysis of managerial functions. New York: McGraw-Hill Book Company
- Kreitner. 2009, Management Theory and Applications, Cengage Learning: India
- Rao V.S. and Narayana P.S., Principles and Practices of Management, 2007, Konark Publishers Pvt. Ltd.

CORE COURSE 3: FASHION STUDIES (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Unit 1 Importance of clothing

15

- Clothing functions and theories of origin
- Clothing terminology
- Individuality and conformity, conspicuous consumption and emulation
- Selection of clothes for self
- Selection and Evaluation of ready-made garments

Unit 2 Fashion

12

- Terminology
- Fashion cycle
- Sources of fashion
- Factors favouring and retarding fashion
- Fashion Forecasting-Seasons, sources, steps in forecasting

Unit 3 Adoption of fashion

8

- Consumer groups- fashion leaders, followers
- Adoption process- Trickle-down theory, bottom up theory & trickle across theory

Unit 4 Fashion centers and designers of the world

15

- Role of designer
- Fashion centres and leading designers

Unit 5 Design

10

- Elements and principles of design
- Structural and applied design

PRACTICAL

1. Flat sketching of garments
2. Fashion forecast study and development of mood boards and theme boards
3. Analysis of fabric and trims sourced from various fashion retail stores
4. Study of collections of famous designers

RECOMMENDED READINGS

- Brown, Patty, Rice J., 1998, Ready to Wear Apparel Analysis. Prentice Hall.
- Marshall S G, Jackson H O, Stanley MS, Kefgen M & Specht T, 2009, Individuality in Clothing & Personal Appearance, 6th Edition, Pearson Education, USA.
- Tate S.L., Edwards M.S., 1982, The Complete Book of Fashion Design, Harper and Row Publications, New York.

CORE COURSE 4: FUNDAMENTALS OF NUTRITION AND FOOD SCIENCE (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Unit 1 Basic concepts in food and nutrition

5

- Basic terms used in study of food and nutrition
- Understanding relationship between food, nutrition and health
- Functions of food-Physiological, psychological and social

Unit 2 Nutrients

20

Functions, dietary sources and clinical manifestations of deficiency/ excess of the following nutrients:

- Carbohydrates, lipids and proteins
- Fat soluble vitamins-A, D, E and K
- Water soluble vitamins – thiamin, riboflavin, niacin, pyridoxine, folate, vitamin B₁₂ and vitamin C
- Minerals – calcium, iron and iodine

Unit 3 Food Groups

25

Selection, nutritional contribution and changes during cooking of the following food groups:

- Cereals
- Pulses
- Fruits and vegetables
- Milk & milk products

- Eggs
- Meat, poultry and fish
- Fats and Oils

Unit 4 Methods of Cooking and Preventing Nutrient Losses

10

- Dry, moist, frying and microwave cooking
- Advantages, disadvantages and the effect of various methods of cooking on nutrients
- Minimising nutrient losses

PRACTICAL

1. Weights and measures; preparing market order and table setting
2. Food preparation, understanding the principles involved, nutritional quality and portion size

- **Beverages:** Hot tea/coffee, Milk shake/ lassi, fruit based beverages
- **Cereals:** Boiled rice, pulao, chapatti, parantha, puri, pastas
- **Pulses:** Whole, dehusked
- **Vegetables:** curries, dry preparations
- **Milk and milk products:** Kheer, custard
- **Meat, Fish and poultry preparations**
- **Egg preparations:** Boiled, poached, fried, scrambled, omelettes, egg pudding
- **Soups:** Broth, plain and cream soups
- **Baked products:** Biscuits/cookies, cream cakes, sponge cake preparations, tarts and pies
- **Snacks:** pakoras, cutlets, samosas, upma, poha, sandwiches
- **Salads:** salads and salad dressings.

RECOMMENDED READINGS

- Khanna K, Gupta S, Seth R, Mahna R, Rekhi T (2004). *The Art and Science of Cooking: A Practical Manual*, Revised Edition. Elite Publishing House Pvt Ltd.
- Raina U, Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S (2010). *Basic Food Preparation: A Complete Manual*, Fourth Edition. Orient Black Swan Ltd.
- Bamji MS, Krishnaswamy K, Brahmam GNV (2009). *Textbook of Human Nutrition*, 3rd edition. Oxford and IBH Publishing Co. Pvt. Ltd.
- Srilakshmi (2007). *Food Science*, 4th Edition. New Age International Ltd.
- Wardlaw and Insel MG, Insel PM (2004). *Perspectives in Nutrition*, Sixth Edition. Mosby.
- Chadha R and Mathur P (eds). *Nutrition: A Lifecycle Approach*. Orient Blackswan, Delhi. 2015

CORE COURSE 5: LIFE SPAN DEVELOPMENT I (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Unit 1 Understanding Human Development

20

- Definitions, scope and multidisciplinary nature of Human Development

- Contexts, stages and domains of development
- Principles of Growth and Development: Norms and Milestones
- Conception, pregnancy and birth
- Influences on pregnancy

Unit 2 Early Childhood Years 22

- Capacities of neonate
- Development in Infancy and Preschool
 - Physical-motor development
 - Cognitive and language development
 - Socio-emotional development; Family, Preschool and Play

Unit 3 Middle Childhood Years 18

- Physical-motor development
- Cognitive and language development
- Socio-emotional development; School, Peers and Media
- Moral development

PRACTICAL

1. Methods of child study and their use:
 - Interview
 - Observations
 - Checklist
2. Plan and develop activities to facilitate development in different domains
3. Use of secondary sources to understand the depiction of children
4. Psychometric tests for children- Developmental Assessment Scale for Indian Infants (DASII), Wechsler Preschool and Primary Scales of Intelligence (WPPSI), Children Apperception Test (CAT)

RECOMMENDED READINGS

- Berk, L. E. (2007). Development through the lifespan. Delhi: Pearson Education.
- Rice, F. P. (1998). Human Development: A lifespan approach. New Jersey: Prentice a. Hall.
- Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata a. McGraw- Hill.
- Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: Orient BlackSwan.

**CORE COURSE 6 : FUNDAMENTALS OF TEXTILES
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY

LECTURES 60

Unit 1 Textile fibres and their properties

- Primary and secondary properties of textile fibres with reference to their effect on fibre characteristics **16**
- Molecular structure of fibres
- Classification of fibres
- Origin, production and properties of various fibres: Natural-cotton, linen, wool, silk. Man-made-rayon, polyester, polyamide (nylon 6,6) acrylics, elastomeric fibres

Unit 2 Yarns

12

- Basic principle of yarn making: Mechanical spinning (cotton system, wool system, worsted system), Chemical spinning (wet, dry and melt)
- Types of yarns: Staple, Filament, Simple, complex
- Properties of yarns: Yarn numbering systems and twist
- Textured yarns: Classification, manufacture and properties
- Blends: Types of blends and purpose of blending

Unit 3 Fabric construction

14

- Weaving: Parts and functions of the loom
- Weaves : Classification, construction, characteristics and usage
- Knitting: Classification, construction, characteristics and usage
- Non woven and felts-construction, properties and usage

Unit 4 Dyeing, Printing and Finishing

18

- Classification of dyes
- Stages of dyeing
- Printing methods and style
- Classification of finishes
 - Preparatory finishes
 - Finishes affecting appearance and texture
 - Finishes for enhancing special characteristics

PRACTICAL

1. Fibre Identification tests –Visual, burning, microscopic and chemical
2. Yarn Identification – Single, ply, cord, textured, elastic, monofilament, multifilament and spun yarn
3. Thread count and balance
4. Dimensional stability

5. Weaves- Identification and their design interpretation on graph
6. Fabric analysis of light, medium & heavy weight fabrics (five each)
 - Fibre type
 - Yarn type
 - Weave
 - GSM
 - End use
 - Trade name
7. Tie and Dye : Different methods

RECOMMENDED READINGS:

- Corbman, P.B., (1985) Textiles- Fiber to Fabric (6th Edition), Gregg Division/McGraw Hill Book Co., US.
- Joseph, M.L., (1988) Essentials of Textiles (6th Edition), Holt, Rinehart and Winston Inc., Florida.
- Sekhri S., (2013) Textbook of Fabric Science: Fundamentals to Finishing, PHI Learning, Delhi.
- Tortora, G. Phyllis, Understanding Textiles, McMillan Co. USA.
- Vilensky G., (1983) Textile Science, CBS Publishers and Distributors, Delhi.

**CORE COURSE 7: PHYSICAL SCIENCES
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY

LECTURES 60

SECTION A –CHEMISTRY

Unit 1 Solutions 6

Types of solutions, different ways of expressing concentration of solution, colloids and its properties, types of colloids, colloids in daily life

Unit 2 Acids, bases and salts 5

Concept of acid, base and salt, neutralization reaction, pH and pH scale, buffer solutions, Applications in everyday life

Unit 3 Redox Reactions 5

Concept of oxidation and reduction and its applications in daily life

Unit 4 Organic Chemistry 6

Carbon and its tetravalency, catenation, tendency to form multiple bonds, classification of organic compounds, homologous series, functional groups, nomenclature.

Unit 5 Household Chemicals **8**

- a. Chemicals in foods- preservatives and colourants
- b. Antiseptics and disinfectants
- c. Soaps and detergents

SECTION –B: PHYSICS

Unit 1 **6**

- Measurements of Physical Quantities- Units and dimensions.
- Different types of motions, Laws of motions and examples.
- Gravity and Gravitation.
- Work, Power and Energy.

Unit 2 **6**

- Temperature and its measurements.
- Calorimetry, change of state with applications.
- Heat Transfer- modes and examples.

Unit 3 **7**

- Refraction, Reflection and Diffusion of light.
- Lighting fixtures- Fluorescent tube, Incandescent lamp, night lamp, CFL, LED.
- Normal Vision, Defects of vision.
- Lasers- Properties and Applications.

Unit 4 **8**

- Concept of current, voltage and resistance- Ohm's Law.
- Conductors and Insulators of electricity and their applications.
- Household wiring- safety features- fuse, MCB and earthing.
- Efficient transmission of electric power.

Unit 5 **3**
Consumer Awareness

- Guarantee and warranty of all household equipments.
- Precautions while using equipments and servicing of equipment used.

PRACTICAL

Section A: CHEMISTRY

1. Preparation of standard solutions
2. Determination of pH of different solutions
3. Volumetric analysis
 - a. Titration of strong acid vs strong base(Acid-base titration)
 - b. Titration of potassium permanganate vs Mohr's salt(Redox titration)
4. Detection of functional groups- Acids, Alcohols, Aldehydes and Ketones

Section B: PHYSICS

1. Determination of the volume of the given body using Vernier Callipers.
2. To determine the correct weight of a body using a false balance.
3. To verify principle of moments and to determine the weight of unknown body using a lever.
4. Comparison of thermometric scales of temperature using graph method.
5. Determination of focal length of double convex lens by one pin method.
6. To determine the magnifying power of telescope by linear method.
7. Setting up of two way lighting circuit and calculation of cost of electricity consumed.
8. Repair and testing of electric iron and fuse.
9. To verify the Ohm's Law and determine the resistance of conductor by graph method.
10. Determination of 'g' by simple pendulum method.

RECOMMENDED READINGS

- Arun Bahl and B. S. Bahl : 2010, Advanced Organic Chemistry, S. Chand
- T.Jacob, 1979, Textbook of Applied Chemistry by McMillan India Ltd.
- Puri, Sharma and Pathania, 2008, Principles of Physical Chemistry by Vishal Publishing House.
- Ahluwalia, V. K., Dhingra, S., Gulati, A., 2005, College Practical Chemistry University Press India Pvt. Ltd .
- B.Sc. Practical Physics by Harnam Singh, S.Chand and Co, 2001.
- Lal, S. (1995). Fundamentals Physics, Pradeep Publications, Delhi.
- Peet, L.J., Pickett, M.S. & Arnold, M.G. (1979). Household Equipment, John Wiley and Sons, USA.
- Partab, H. (1987). Electrical Gadgets, Dhanpat Rai & Sons.
- Sharma, S.K. & Jerath, R. (2013). Dinesh New Millenium Physics. Vol. I and Vol. II.
- Khan, N. (2008). Physics. Oxford University Press.

**CORE COURSE 8: LIFE SPAN DEVELOPMENT II
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY

LECTURES 60

Unit 1 Introduction to Adolescence

24

- Definition and theoretical perspective
- Physical and physiological changes
- Cognitive and language development
- Socio-emotional and moral development

Unit 2 Young Adulthood

18

- Transition from adolescence to adulthood
- Developmental tasks of adulthood
- Socio-emotional development; Relationships, Marriage and Parenting
- Cognition and creativity: Work, Vocation and leisure
-

Unit 3 Middle and Late Adulthood

18

- Developmental tasks of middle and late adulthood
- Physical and physiological changes and aging
- Diversity in roles and relationships
- Parenting growing children
- Cultural perspective on aging and death

PRACTICAL

1. Methods of study and their use:
 - Reviewing Interview and Observation
 - Questionnaire
 - Case study
 - Sociometry
2. Case profile to study adolescence/ young adulthood/ late adulthood
3. Depictions of adolescence and adulthood in media: Audio-visual, Print and Theatre
4. Psychological tests: Thematic Apperception Test (TAT), WAIS (Wechsler Adult Intelligence Scale), Test assessing SELF CONCEPT

RECOMMENDED READINGS

- Rice. F. P. (1998). Human Development: A lifespan approach. New Jersey: Prentice Hall.

- Rutter, M. and Rutter, M. (1992) Developing Minds. Challenge and continuity across the life span. London: Penguin.
- Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata McGraw- Hill.
- Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: Orient BlackSwan.
- Tennant, M. and Pogson, P. (1995) Learning and Change in the Adult Year, San Francisco: Jossey-Bass.

**CORE COURSE 9:NUTRITION FOR THE FAMILY
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY

LECTURES 60

Unit 1 Basic concepts meal planning

16

- Food groups and concept of balanced diet
- Food exchange list
- Concept of Dietary Reference Intakes
- Factors effecting meal planning and food related behaviour.
- Dietary guidelines for Indians and food pyramid

Unit 2 Nutrition during the adult years

24

Physiological changes, RDA, nutritional guidelines, nutritional concerns and healthy food choices

- Adult
- Pregnant woman
- Lactating mother
- Elderly

Unit 3 Nutrition during childhood

20

Growth and development, growth reference/ standards, RDA, nutritional guidelines, nutritional concerns and healthy food choices

- Infants
- Preschool children
- School children
- Adolescents

PRACTICAL

1 Introduction to meal planning

3

-Use of food exchange list

2 Planning and preparation of diets and dishes for 10

- Young adult
- Pregnant and Lactating woman
- Preschool child
- School age child and adolescents
- Elderly

3 Planning complementary foods for Infants 1

RECOMMENDED READINGS

- Seth V and Singh K (2006). *Diet Planning through the Life Cycle: Part I Normal Nutrition. A Practical Manual*. Elite Publishing House Pvt. Ltd. New Delhi.
- Gopalan C, Rama Sastri BV, Balasubramanian SC (1989) *Nutritive Value of Indian Foods*. National Institute of Nutrition, ICMR, Hyderabad.
- Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2013). *Textbook of Nutrition and Dietetics*. Phoenix Publishing House Pvt. Ltd.
- Wardlaw GM, Hampi JS, DiSilvestro RA (2004). *Perspectives in Nutrition*, 6th edition. McGraw Hill.
- ICMR (2011) *Dietary Guidelines for Indians*. Published by National Institute of Nutrition, Hyderabad.
- ICMR (2010) *Recommended Dietary Allowances for Indians* .Published by National Institute of Nutrition, Hyderabad.
- Chadha R and Mathur P eds. *Nutrition : A Lifecycle Approach*. Orient Blackswan, New Delhi. 2015.

**CORE COURSE 10: LIFE SCIENCES
(CREDITS: THEORY-4, PRACTICALS-2)**

THEORY

LECTURES: 60

SECTION A - BOTANY

Unit 1 Introduction to Plant Kingdom 7

- Classification of Plant Kingdom
- Angiospermic plants (Flower with details of its parts)
- Formation of fruit, seed and embryo
- Structure of monocot and dicot seed and seed germination

Unit 2 Anatomy of Plants 8

- Plant cell- structure of chloroplast and cell wall of flowering plants
- Types of plant tissue- meristematic and permanent tissue
 - Simple tissue- parenchyma, collenchyma, sclerenchyma and stomata
 - Complex tissue- xylem and phloem

Unit 3 Propagation of plants – seed and vegetative **7**

- Seed Propagation
- Cuttings – stem, leaf and root
- Layering
- Grafting

Unit 4 Physiology **8**

- Important physiological processes (Diffusion, Osmosis and plasmolysis)
- Ascent of sap. Absorption of water, transpiration
- Brief account of photosynthesis and respiration in plants
- Role of microorganisms in soil fertility (Nitrogen cycle, carbon cycle, sulphur cycle)

SECTION B- ZOOLOGY

Unit 1 **8**

- Classification of animal kingdom
- Chordates up to 5 major classes, characteristics with examples
- Non chordates up to phyla, characteristics with examples
- Cell theory, electron microscopic structure and function of a cell
- Cell division and its significance

Unit 2 **8**

- Parasites and human diseases
- Plasmodium, Giardia, Entamoeba, Taenia, Ascaris
- Economics importance and control of common household pests e.g. cockroach, housefly, mosquitoes and termites.
- Identification and control of important stored grain pests.

Unit 3 **7**

- Introduction to Stem cell technology
- Cloning
- Transgenic animal and their importance

Unit 4 **7**

- Basics of Genetics
- Genetic disease and sex linked inheritance
- Importance of Genetic counseling

PRACTICAL

SECTION A- BOTANY

- Study of permanent slides of dicot stem, monocot stem, dicot and monocot root, dorsiventral leaf and isobilateral leaf.
- Propagation of plants by seed and vegetative methods

- Preparation of temporary mounts (a) onion peel, (b) Epidermis of Rhoec
- Physiology experiments: (a) Photosynthesis (b) Transpiration
- Floral description of few angiospermic families

SECTION B- ZOOLOGY

- Survey of animal kingdom (2-3 specimens from each class/ phylum)
- Study of cells – neurons, blood cells, cheek cells, Vermi composting

RECOMMENDED READINGS

- Chadha K.L.2012. Handbook of Horticulture. ICAR Publication.
- Dutta A. C. Botany for Degree Students 1968, Oxford University Press, New Delhi
- Gopaldaswamianger K.S. 1991, Complete gardening in India, Messers Nagaraj And Co. Madras
- Hartman H.T.and D. Kester:D. 1986. Plant Propagation, Principles and Practices, Prentice Hall of India Pvt. Ltd. New Delhi.
- Kochhar P.L. Krishnamoorthy H.N 1984. A textbook of Plant Physiolog. Atma Rani Publishing House.
- Raven P. and Johnson G. 2010. Biology. Mc Graw Hill Science.
- Soni N.K. and Soni V. 2010. Fundamentals of Botany. Tata Mc Graw Hill Education
- Jordan and Verma,1998, Invertebrate Zoology, S. Chand and Co. Ltd
- Kotpal,2000,Modern Textbook of Zoology, Rastogi Publications
- Winchester, A.M. 1967, Genetics, Oxford and IBH Publishing Company
- Vij and Gupta (2011)Applied Zoology, Phoenix Publishing House

CORE COURSE 11 : PERSONAL FINANCE AND CONSUMER STUDIES (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURE 60

Unit 1 Income and Expenditure

18

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

Unit 2 Consumer in India: Consumer problems and education**20**

- Definition of a consumer
- Role of consumers in the economy, National Income, Per Capita Income, Household wise distribution of income
- Changing nature of the business world –e-commerce, e-business
- Types of consumer problems – products and service related, investment and infrastructure related, Causes and solutions
- Consumer education and empowerment

Unit 3 Consumer Protection**22**

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

PRACTICAL

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

RECOMMENDED READINGS

- Khanna S.R., Hanspal S., Kapoor S. &Awasthi H.K., 2007, Consumer Affairs, Universities Press India Pvt. Ltd.
- Sawhney, H.K. & Mital, M.,2007, Family Finance & Consumer Studies, Elite Publishing House Pvt. Ltd.
- Seetharaman, P. and Sethi, M.,2001, Consumerism: Strength and Tactics, New Delhi: CBS Publishers.

**CORE COURSE 12 : COMMUNICATION SYSTEMS AND SOCIAL CHANGE
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY **LECTURES 60**

Unit 1 Understanding Self **8**

- Awareness of self in communication
- Intrapersonal Communication
- Self-concept and self esteem

Unit 2 Interpersonal Communication **15**

- Concept, types and functions of interpersonal communication
- Dyadic, small and large group communication
- Stages in human relationship development
- Small group communication: types and functions

Unit 3 Organization, Public and Mass Communication **25**

- Organizational communication: concept, types, functions and networks
- Public communication- concept and techniques
- Mass Communication- concept, significance, functions and elements
- Theories and models of mass communication
- Intercultural communication- concept, stages and barriers
- Relationship between culture and communication

Unit 4 Mass Media **12**

- Mass Media- characteristics and significance of print, electronic and web based media
- Print Media: types, nature, characteristics, reach, access.
- Radio: types, nature, characteristics, reach, access.
- Television and cinema: types, nature, characteristics, reach, access.
- ICTs: types, characteristics, reach and access.

PRACTICAL

- Exercises for understanding Self.
- Studying group dynamics in organizations- formal and informal.
- Audience analysis- readership, listenership and viewership studies
- Content analysis of mass media

RECOMMENDED READINGS

- Devito, J. (1998) Human Communication. New York: Harper & Row.
- Baran, S. (2014) Mass Communication Theory. Wadsworth Publishing
- Barker, Larry Lee. (1990) Communication. Eaglewood Cliffs, New Jersey: Prentice Hall.
- McQuail, D. (2000) Mass Communication Theories. London: Sage Publications
- Vivian, J. (1991) The Media of Mass Communication
- Stevenson, D. (2002) Understanding Media Studies: Social Theory and Mass Communication, Sage Publications

DISCIPLINE SPECIFIC ELECTIVE (DSE)

DSE 1 A: NUTRITIONAL BIOCHEMISTRY (CREDITS: THEORY-4, PRACTICAL-2)

THEORY	LECTURES	60
Unit 1 Introduction to Biochemistry		2
<ul style="list-style-type: none">• Definition, objectives, scope and inter-relationship between biochemistry and other biological sciences		
Unit 2 Carbohydrates		10
<ul style="list-style-type: none">• Definitions, classification, structure and general properties of:• Monosaccharides-glucose, fructose, galactose, ribose• Disaccharides – maltose, lactose, sucrose• Polysaccharides – dextrin, starch, glycogen		
Unit 3 Lipids		10
<ul style="list-style-type: none">• Definitions and classification of lipids• Types and properties of fatty acids• Composition and properties of fats• Significance of acid value, iodine value and saponification value		
Unit 4 Proteins		12
<ul style="list-style-type: none">• Definition, classification, structure of amino acids• Essential and non-essential amino acids• Definition, classification, elementary knowledge of structure of proteins• Introduction to Enzymes, Co-enzymes, Enzyme Inhibition		
Unit 5 Digestion and absorption:		8
<ul style="list-style-type: none">• Carbohydrates• Proteins• Fats		
Unit 6 Vitamins - Structure and biochemical role:		10
<ul style="list-style-type: none">• Fat soluble vitamins – A, D• Water soluble vitamins – B₁, B₂, niacin, pyridoxine, folic acid, B₁₂ and C		
Unit 7 Minerals		8
<ul style="list-style-type: none">• Biological role and occurrence of inorganic elements – iron, calcium, phosphorous, iodine, selenium and zinc		

RECOMMENDED READINGS

- Lehninger A L, Nelson D L and Cox M M (2009). Principles of Biochemistry, 6th Ed. CBS Publishers and Distributors.
- Murray R.K, Granner D K, Mayes P A and Rodwell V W (2009). Harper's Biochemistry, 28th Ed, Lange Medical Book.

PRACTICAL

1. **Carbohydrates**
 - Qualitative tests for mono, di and polysaccharides and their identification in unknown mixtures
 - Quantitative estimation of glucose, sucrose and lactose by titrimetric method
2. **Fats**
 - Properties of Fats
3. **Proteins**
 - Qualitative tests for proteins
4. **Minerals**
 - Estimation of calcium using EDTA by titration
5. **Vitamins**
 - Estimation of ascorbic acid by using 2, 6 dichlorophenol indophenol method

RECOMMENDED READINGS

- Hawk PB, Oser BL and Summerson WH (1954). Practical Physiological Chemistry, Mcgraw Hill, New York.
- Sundararaj P and Siddhu A (2006). Qualitative Tests and Quantitative Procedures in Biochemistry. Elite Publishing House Pvt. Ltd., New Delhi.

DSE-1 B : PUBLIC NUTRITION AND DIETETICS (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Unit 1 Concept and scope of public nutrition 2

Unit 2 Assessment of nutritional status: methods and application 16

- Direct methods – anthropometry, biochemical and clinical examination
- Indirect methods – dietary surveys, vital statistics

Unit 3 Common nutritional deficiencies 16

- Etiology, prevalence, clinical features, prevention and management of nutritional deficiencies
- PEM

- Micronutrient deficiencies such as Vitamin A deficiency, Nutritional Anemias, Iodine Deficiency Disorders

Unit 4 Introduction to Diet Therapy **6**

- Basic concepts of diet therapy
- Therapeutic modifications of the normal diet

Unit 5 Common diseases/ disorders **20**

Etiology, clinical features and nutritional management of:

- Febrile disorders and HIV-AIDS
- Diarrhoea, constipation
- Underweight, overweight and obesity
- Diabetes and Cardiovascular diseases

PRACTICAL

1. Assessment of nutritional status: 24 hour dietary recall, anthropometry, clinical assessment
2. Development of low cost nutritious recipes for population groups vulnerable to nutritional deficiencies
3. Planning and preparation of diets/dishes for individuals suffering from:
 - Febrile disorders
 - Diarrhoea, constipation
 - Underweight, overweight/ obesity
 - Diabetes and Cardiovascular diseases

RECOMMENDED READINGS

- Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2013). Textbook of Nutrition and Dietetics. Phoenix Publishing House Pvt. Ltd.
- Stacy Nix (2009). William's Basic Nutrition and Diet Therapy, 13th Edition. Elsevier Mosby.
- Wadhwa A and Sharma S (2003). Nutrition in the Community- A Textbook. Elite Publishing Pvt Ltd, New Delhi.
- ICMR (1989) Nutritive value of Indian Foods. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
- ICMR (2011) Dietary Guidelines for Indians – A Manual. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
- Seth V and Singh K (2007). Diet Planning through the Life Cycle Part II: Diet Therapy. A Practical Manual, 4th edition. Elite Publishing House Pvt. Ltd.

**DSE 2 A: CHILDREN WITH DISABILITIES
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY

LECTURES 60

Unit 1 Introduction to Childhood Disabilities **15**

- Defining disabilities
- Models of disability
- Classifying disabilities
- Social construction of disability
- Demography
-

Unit 2 Common Childhood Disabilities **25**

Identification, Assessment and etiology with reference to

- Locomotor disability
- Visual disability
- Auditory and speech disability
- Intellectual disability
- Autism
- Learning Disability

Unit 3 Children with Disabilities and Society **20**

- Families of children with disability
- Prevention and management of different disabilities
- Educational practices- Special education and inclusion
- Policy and laws

PRACTICAL

1. Visits to organisations working with children with disabilities
2. Observing children with disabilities in families and institutions
3. Planning developmentally appropriate material for children with disabilities
4. Exploring audio-visual sources with reference to children with disabilities and their families
5. Select psychometric tests (Ravens Progressive matrices, Portage, Tests for detecting Learning Disabilities)

RECOMMENDED READINGS

- Chopra,G., (2012). *Early Detection of Disabilities and persons with disabilities in the community*. New Delhi: Engage publications
- Chopra,G., (2012). *Stimulating Development of Young Children with Disabilities at Anganwadi and at Home: A Practical Guide*. New Delhi: Engage publications.

- Sharma, N. (Ed)(2010). *The Socail Ecology of Disability-Technical Series -3*Lady Irwin College. Delhi:Academic Excellence
- Mangal, S. K. (2007).*Exceptional children: An introduction to special education*. New Delhi: Prentice Hall of India
- Jangira, N.K.(1997) “Special Educational Needs of Children and Young Adults: An Unfinished Agenda,” *Education and Children with Special Needs: From Segregation toInclusion*,Ed. Seamus Hegarty, Mithu Alur, Thousand Oaks: Sage Publications Inc.
- Karna, G. N. (1999). *United Nations and rights of disabled persons: A study in Indian perspective*. New Delhi: A.P.H. Publishing Corporation.
- Mani, R. (1988). *Physically handicapped in India*. Delhi: Ashish Publishing House.
- Mastropieri, M. A., & Scruggs, T. E. (2004). *The inclusive classroom: Strategies for effective instruction*. NY: Pearson.

**DSE 2 B : CHILD RIGHTS AND GENDER EMPOWERMENT
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY	LECTURES 60
Unit 1 Understanding Child Rights	15
<ul style="list-style-type: none"> • Meaning of Child Rights and Convention on Child Rights • Knowing disadvantage and exclusion in relation to children • Demographic profile of the child in India • The role of state, family and children in promotion and protection of child rights • 	
Unit 2 Children in Difficult circumstances	15
<ul style="list-style-type: none"> • Street children, working children and homeless children • Child Abuse • Child Trafficking • Children in conflict with law • Laws and policies 	
Unit 3 Conceptualizing Gender	15
<ul style="list-style-type: none"> • Defining terms- sex, gender, masculinity, femininity • Socialisation for gender- gender roles, gender stereotypes • Patriarchy and social institutions • Perspectives on feminism 	
Unit 4 Gender Empowerment	15
<ul style="list-style-type: none"> • Demographic profile • Issues and concerns related to girls and women in India • Media and gender • Laws, policies and programmes for girls and women in India 	

PRACTICAL

1. Understanding child rights and gender in diverse social groups through visits
2. Interactions with children in difficult circumstances
3. Understanding gender realities in different social groups
4. Exploring the concept of child rights and gender through audio-visual sources and workshops
5. Programme planning for child rights and gender

RECOMMENDED READINGS:

- Agarwal, A. & Rao, B.V. (2007). Education of Disabled Children. New Delhi: Eastern Book Corporation.
- Agnes, F. (1999). Law and Gender Inequality: The politics of Women's Rights in India. Oxford University Press.
- Bajpai, A. (2006). Child Rights in India: Law, Policy and Practice. Oxford University Press.
- Kishwar, M. (1999). Off the Beaten Track: Rethinking Gender Justice for Indian Women. New Delhi: Oxford University Press.
- Satyarathi, K. and Zutshi, B. (Ed) (2006). Globalization, Development and Child Rights. New Delhi: Shipra Publication.
- Saikia, N. (2008). Indian women: A socio-legal perspective. New Delhi: Serials Publication.

DSE 3A: COMMUNICATION FOR DEVELOPMENT (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Unit 1 Concept of Development Communication

20

- Concept of development, characteristics of developing countries
- Measuring development- Indices of measuring development and classification of countries based on development indices
- Models of Development- Dominant Paradigm, Basic Needs Model, New Paradigm of development
- Development Communication- concept and genesis, characteristics, differences between communication and Development Communication
- Philosophy role and approaches to Development Communication

Unit 2 Understanding Paradigms of Development

20

- Press theories: Normative: Authoritarian, Libertarian, Social Responsibility, Democratic Participant theory; Sociological: Uses & Gratification, Agenda setting; Two-Step Flow; Psychological; Bullet Theory
- Success stories in Development Communication
- Innovations and trends in Development Communication

Unit 3 Development Communication and Media

20

- Traditional Media: types, characteristics, role in development communication
- Development reporting- roles and responsibilities of a development reporter, ethics in reporting, specialized skills required and issues in development reporting
- News reporting: definition of news, ingredients and qualities of news, news value, types of news reports, structure of news reports
- Radio news, features and commentaries. Radio and development communication.
- Television: Programs and genres; role in development communication
- Cinema: role in development communication.
- ICTs: scope in development communication.

PRACTICAL

- Analysis of development indicators - national and international perspectives
- Critical analysis of selected development communication initiatives
- Analysis of media for development communication
- Designing media for development communication

RECOMMENDED READINGS

- Narula, Uma (1994) Development Communication, New Delhi, Hariand Publication
- Servaes, Jan (2008). Communication for Development and Social Change, New Delhi, Sage Publication
- Paulo Mefalopulos. Development Communication Sourcebook- Broadening the boundaries of communication, The World Bank, 2008

DSE 3B: EXTENSION MANAGEMENT (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Unit 1 Extension: Concept

15

- Extension: concept, goals, philosophy and history
- Adult learning Components of Extension
- Principles of extension
- Relationship between communication and extension - role of extension in development

Unit 2 Methods and Approaches of Extension

20

- Stakeholders in development
- People's participation and social mobilization in development
- Extension systems- types, advantages and disadvantages

- Diffusion of innovation and adoption
- Extension methods and approaches - classification, characteristics and selection

Unit 3 Development Programmes **25**

- Development issues and goals- national and international perspectives
- National Development Programmes – goals, strategies, structure and achievements
- Analysis of contemporary national development programmes- objectives, clients, salient features, outcomes and communication support.
- Behaviour Change Communication strategies in development programmes

PRACTICAL

- Analysis of development programmes
- Evaluate strategies used by development agencies for implementation of development programmes
- Develop skills in planning and using individual and small group methods in extension

RECOMMENDED READINGS

- Mikkelsen, Britha, (2002), Methods for Development Work and Research. New Delhi: Sage Publications
- Dale R, (2004) Evaluating Development Programmes and Projects. New Delhi : Sage Publications
- Kumar & Hansra, (1997) Extension Education for Human Resource Development. New Delhi: Concept Publishers.

**DSE 4A: PROCESSES IN APPAREL DESIGN
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY **LECTURES 60**

Unit 1 Introduction to pattern making **10**

- Importance of taking body measurements
- Importance of patterns and pattern information
- Methods of pattern making

Unit 2 Preparatory steps for garment construction **14**

- Fabric grain
- Preparatory steps- preshrinking, straightening and truing
- Layouts for patterns- general guidelines, basic layouts- lengthwise, partial lengthwise, crosswise, double fold, open, combination fold
- Pinning, marking and cutting
- Layouts for fabrics- Unidirectional, bold and large prints, plaids, stripes and checks, various widths of fabrics

Unit 3 Seams and finishing of raw edges **12**

- Types of seams- Plain and its finishing, flat, ridge, decorative
- Additional seam techniques: clipping, notching, grading, trimming, easing, under stitching, stay stitching, trimming a corner.
- Crossway strips-importance and applications
- Finishing of hemlines

Unit 4 Study of garment components: **15**

Classification and application of sleeves, cuffs, collars, necklines, plackets, pockets, yokes, trims and accessories

UNIT 5 Design & Fit **9**

- Designing for different figure types
- Fit: Fitting area, fitting guidelines, fitting procedure

PRACTICAL

1. Development and identification of seams, plackets, fasteners, edge finishing (binding, facing), pleats and gathers
2. Development of bodice, skirt and various sleeves and collars for self
3. Develop style variations in adult bodice using dart manipulation on half scale standard block
4. Adaptation of basic skirt block into style variations (Half scale)
5. Construction of skirt for self
6. Construction of skirt top/ kurta for self

RECOMMENDED READINGS

- Armstrong, H.J., 2009, Pattern Making for Fashion Design, Harper Collins Publishers Inc., Ney York.
- Stamper, A.A., S. H. Sharp and L.B. Donnell, 1986, Evaluating Apparel Quality, Fairchild Publications, America
- Liechty, E.G., Potterberg, D.N., Rasband, J.A., 2010, Fitting and Pattern Alteration : A Multimethod Approach, Fairchild Publications, New York.

DSE 4B : TRADITIONAL INDIAN TEXTILES
(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Unit 1 Study of Textile Crafts of India: with reference to history, production centers, techniques, designs, colours and products

- Woven Textiles-Benaras Brocades , Jamdanis and Baluchars of Bengal, **10**
Kani Shawls of Kashmir

- Embroidered Textiles-Kanthas of Bengal, Kasuti of Karnataka, Phulkari of Punjab, Chikankari of Uttar Pradesh, Kashida of Kashmir, Gujarat embroideries 14
- Painted and Printed textiles –Kalamkaris of Andhra Pradesh, Dabu printing of Rajasthan , Ajarakh prints of Gujarat 8
- Dyed textiles –Bandhnis of Rajasthan and Gujarat, Ikats- Patola of Gujarat, Bandhas of Orissa, Telia Rumal 10

Unit 2 Status of Traditional Textiles in Modern India 10

- Evolution and socio-economic significance of Khadi, Handloom and Handicraft sector
- Sustenance of traditional textile crafts
- Interventions by organizations

Unit 3 Conservation of Textiles 8

- Factors affecting deterioration of textiles
- Care and storage of textiles

PRACTICAL

1. Tie & dye using various techniques on cellulose and protein fibers
 - Batik on cotton
 - Block printing: pigment
2. Embroidery stitches of traditional embroideries
3. Portfolio development-Traditional textile crafts
 - Woven
 - Painted/printed
 - Embroideries
4. Product development
5. Visit to craft centers

RECOMMENDED READINGS

- Agarwal, O.P., 1977, Care and Presentation of Museum projects – II, NRL
- Chattopadhyaya, K.D., 1995, Handicrafts of India, Wiley Eastern Limited, N Delhi
- Das, Shukla, 1992, Fabric Art- Heritage of India, Abhinav Publications, N Delhi

**DSE 5A: ENTREPRENEURSHIP DEVELOPMENT
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY

LECTURES 60

Unit 1 Entrepreneurship Development 18

- Entrepreneurship- concept, definition, need and significance of entrepreneurship development in India, entrepreneurship growth process, barriers, entrepreneurship education model.

- Entrepreneur-their characteristics, types, gender issues, role demands and challenges.
- Entrepreneurial Motivation.
- Challenges faced by Women Entrepreneurs

Unit 2 Enterprise Planning and Launching 18

- Types of enterprises classification based on capital, product, location, ownership pattern and process
- Sensing business opportunities and assessing market potential; market research
- Appraising of project and feasibility

Unit 3 Enterprise Management and Networking 24

- Managing Production
 - Organizing Production; input-output cycle
 - Ensuring Quality
- Managing Marketing
 - Understanding markets and marketing
 - Functions of Marketing
 - 4Ps of Marketing(same as marketing mix)
- Financial Management
 - Meaning of Finance
 - Types and Sources of Finance
 - Estimation of project cost
 - Profit Assessment
- Networking of Enterprises

PRACTICAL

1. SWOT analysis with respect to entrepreneurial competencies through case profiling of successful entrepreneurs and enterprises.
2. Achievement Motivation lab-development of entrepreneurial competencies
3. Survey of an institution facilitating entrepreneurship development in India.
4. Preparation of business plan.

RECOMMENDED READINGS

- Gundry Lisa K. & Kickul Jill R.,2007, Entrepreneurship Strategy: Changing Patterns in New Venture Creation, Growth, and Reinvention, SAGE Publications, Inc.
- Taneja & Gupta, 2001, Entrepreneur Development- New Venture Creation, Galgotia Publishing Company

**DSE 5B: BASICS OF DESIGN APPLICATION
(CREDITS: THEORY-4, PRACTICAL-2)**

THEORY

LECTURES 60

Unit 1 Design Fundamentals

30

- Objectives of Art & Interior Design.
- Types of Design: Structural & Decorative.
- Elements of Content: Space, Point, Line, Shape, Form, Texture, Light & Color.
- Elements of Order: Scale, Similarity, Proximity, Sequence, Trends, Themes, Geometrical Organization.
- Principles of Composition – Rhythm, Balance, Proportion, Emphasis, Unity, (Variety, Simplicity/Economy, Suitability).
- Composition of a Drawing – Harmony, Clarity, Adequacy.
- Color & its Application.
 - Dimensions of color.
 - Importance of color & its role in creation of the design.
 - Color systems & Theories.
 - Color Harmonies.
 - Principles of Design as applied to color use.
 - Color Forecasting
- Design Drawing – Drawing as a language to explore & communicate Ideas.

Unit 2 Furniture & Furnishings: Historical Perspectives & Contemporary Trends **30**

- History of Interior Design – including periods like Mughal Architecture, Colonial style, Renaissance.
- Architectural Styles –based on themes and main periods, like post Renaissance and modern style.
- Contemporary Trends in Interior Design with respect to furniture, furnishings & accessories.
- Furniture – Types, Construction, Selection and purchase, Arrangement, Care and maintenance
- Furnishings – selection, care and maintenance of fabrics used for -
 - Soft furnishings: curtains and draperies, upholstered furniture, cushions and pillows, etc.
 - Floor coverings
- Accessories – Uses, Classification, Design, Selection & Arrangement.
- Traditional and Modern Surface Finishes – types and uses
 - Furniture
 - Wall
 - Floor
 - Ceilings
 - Roofing

- Lighting applications (Energy efficient lighting design – number and type of lamps and luminaires for efficiency in lighting).
- Accessories – Uses, Classification, Design, Selection & Arrangement.

PRACTICAL

- Drawing – Introduction to drawing instruments & tools (manual & computer tools)
 - Drawing lines (freehand & with drawing instruments) - both 2-dimensional & 3-dimensional
 - Lettering
 - Sketching (figures, buildings, trees & plants, vehicles) - both 2-dimensional & 3-dimensional
 - Rendering for different surfaces such as trees, brick, grass, water, wood, stone, earth, concrete using Water Colours, Stubbing, Pencil Colours
- Preparation of catalogue comprising pictures denoting application of Art & Elements of Design; Colour - Colour Wheel, Dimension & Harmonies of Colour.
- Floor plans with rendering (Theme based- Manual/Computer aided)
- Elevation & perspective plans with rendering (Manual/Computer aided)
- Furniture & furnishing plans of specific areas- Critical Analysis
- Preparation of portfolio based on historical designs & market review of furniture and furnishing materials (upholstery, curtains and draperies, bed & table linen)
 - Wall coverings & decorations (pictures, etc)
 - Floor coverings & decorations
 - Window & door treatments
 - Lighting systems
 - Artifacts (sculptures, ceramics/terracotta, handicrafts, flower arrangements, etc.)
 - Fittings and fixtures
 - Wood and its substitute

RECOMMENDED READINGS

- Lawrence M, (1987), Interior Decoration, New Jersey: Chartwell Books.
- Riley & Bayen., (2003), The Elements of Design, Mitchell Beazley.

SKILL ENHANCEMENT COURSES

SEC 1: SOCIOLOGY OF WORKING WITH FAMILIES AND COMMUNITIES (CREDITS: THEORY:-2)

THEORY

LECTURES 30

Unit 1

- Various dimensions of family, society and culture, cultural stereotypes, **10**
- Poverty and deprivation.
- Customs, belief and folklore in everyday life.
- Cultural plurality, practices and ethnic identity.
- Role of media.

Unit 2

- Social mobility and social change **10**
- Forms of stratification and their interrelationships: class, ethnicity, gender, caste, race and occupation.
- Ethnographic approaches to the study of groups.

Unit 3 Emergence of New Ideological Orientations

10

- Conflicts and consensus in society.
- Changing gender spaces in family, work and its implication on the individual and society across cultures.
- Experiences of exclusion on the individual: caste, minority, disability, violence, immigration.

RECOMMENDED READINGS

- Abraham, M. F. (2006). Contemporary Sociology: An introduction to concepts and theories: New York: Oxford University Press.
- Beattie, J. (1964). Other cultures. Cohen and West.
- Das, V. (Ed.) (2003) The Oxford companion to sociology and social anthropology: volume 1 and 2. New Delhi: Oxford University Press.
- Johnson, M.H. (2001). Sociology: A systematic introduction. New Delhi: Allied Publishers Limited.
- Rawat, H.K. (2007). Sociology: Basic concepts. New Delhi: Rawat Publications.

- Srinivas, M.N. (Ed.) (1996). Caste: Its twentieth century avatar. New Delhi: Viking Penguin

**SEC 2: UNDERSTANDING PSYCHOLOGY
(CREDITS: THEORY:-2)**

THEORY

LECTURES 30

Unit 1 Introduction

- Concept and definition of psychology: Perspectives on behavior.
- Major subfields of psychology; Psychology in modern India;
- Biological basis of human behavior.

Unit 2 Perception:

- Perceptual processing, Role of attention in perception, Perceptual organization.
- Perception of depth, distance and movement; Illusions.

Unit 3 Learning:

- Classical conditioning, operant conditioning, observational learning; Learning strategies; Learning in a digital world

Unit 4 Memory:

- Models of memory: Levels of processing, Parallel Distributed Processing model
- Information processing, Reconstructive nature of memory; Forgetting, Improving memory

RECOMMENDED READINGS

- Baron, R. & Misra. G. (2013). Psychology. Pearson.
- Morgan, Clifford T, King Richard A, Weisz, John R, Schopler John. (1993). Brief Introduction to Psychology Tata McgrawHill
- Ciccarelli , S. K., & Meyer, G. E. (2010). Psychology: South Asian Edition. New Delhi: Pearson Education
- Passer, M.W. & Smith, R.E. (2010). Psychology: The science of mind and behaviour. New Delhi: TataMcGraw-Hill
- Woolfolk, A., Misra, G., & Jha, A. K. (2012). Fundamentals of Educational Psychology. Pearson

**SEC 3: OVERVIEW OF INDIAN ECONOMY
(CREDITS: THEORY:-2)**

THEORY

LECTURES 30

Unit 1 Introduction – Economic system, Consumption and production and distribution 15

- Definition, scope of Economics.
- Central problems of an economy
- Wants – Classification and Characteristics.
- Utility – Law of Diminishing Marginal Utility, Law of Equi-Marginal Utility
- Demand – Law of Demand, Elasticity of Demand.
- Engel’s Law of Consumption.
- Consumer’s Surplus
- Supply – Law of Supply, Elasticity of Supply.
- Equilibrium of Demand and Supply.
- Factors of Production– land, labour and capital
- National Income estimates
- Types of Markets
- Money-Types & functions of money, value of money – quantity theory, Measurement of the value of money-Index number, Inflation
- Types & functions of Banks
- Revenue, Taxation and International trade

Unit 2 Indian Economic Environment

15

Structure of Indian Economy: Changing structure of Indian Economy.

- Constraints on growth: issues of population, income distribution, poverty,unemployment, inequality and migration, food security.
- Role, importance and organization of Indian Agriculture.
- Role, importance and problems of Indian industries, India's International Business and Balance of payment problems.
- Resent developmental programmes of the Government of India:Jana Dhana Yojna, Sarva Siksha Yojana.
- Planning: models, objectives and achievement
- Issues related to health, education, environmental problems and gender.

RECOMMENDED READINGS

- Ahuja H.L., 2010, Modern Micro Economics. Sultan Chand & sons
- Dhingra IC and Garg VK, 2010, Introductory Economic Theory. Sultan Chand & Sons
- Mishra & Puri, Recent edition 2014, Indian Economy, Himalaya Publishing House.
- Mithani D.M., 2010 New Edition, Macro-Economics. Himalaya Publishing House
- Sundaram K.P.M., 2010, Introduction to Economics. Ratan Prakashan

**SEC 4: HUMAN PHYSIOLOGY
(CREDITS: THEORY-2)**

THEORY

LECTURES: 30

Unit 1

5

- Introduction to Human body: Organs, tissue and cell, cell structure, cellular organelles and their functions.
- Blood and Lymphatic System:
- Blood - Composition and functions.
- Plasma Protein -Composition and functions.
- Lymphatic system: Lymphatic system structure and function
- Structure and functions of lymph node and lymphatic ducts (Right lymphatic duct & Thoracic Duct)

Unit 2

12

Cardiovascular system:

- Structure of heart, circulations (systemic, pulmonary, and portal)
- Cardiac output (Definition and factors affecting)
- Blood pressure (Definition and factors affecting)
- Respiratory Physiology: general overview of the respiratory passage, structure and functions.
- Respiratory Physiology: general overview of the respiratory passage, structure and functions.
- Structure of lungs and its function

Digestive system:

- Overview of the Gastrointestinal Tract, organization and functions.
- Structure and functions of:
 - ✓ Stomach,
 - ✓ Liver,
 - ✓ Gallbladder,
 - ✓ Pancreas

Unit 3

10

Excretory System:

- Structure and functions of kidney and nephrons.
- Endocrine System:
- Overview of endocrine system, feedback mechanism/cascade. Structure of main endocrine glands and their functions: Pituitary, Thyroid, and Pancreatic hormones

Reproductive System:

- Structure and functions of uterus and ovaries.
- Physiology of Menstruation and Menopause

Unit 4

3

Overview of organization of nervous system

CSF composition and functions

Reflex arc

RECOMMENDED READINGS

- Ganong WF (2014). Review of Medical Physiology, 24th ed. McGraw Hill.
- Ross and Wilson (2013). Anatomy and Physiology in health and illness, 11th ed. Medical Division of Longman Group Ltd.
- Guyton, A.C. and Hall, J.E.(2000)Textbook of Medical Physiology.10th ed. India: Harcourt Asia
- Das, A.(2004)Medical Physiology-Vol. I and II 3rd Books and Allied (P) Ltd.
- Tortora, G.J and Grabowski, S.R.(2000)Principles of Anatomy and Physiology.9th ed. John Wiley and Sons.Inc.
- Chaudhari S K.(2000) Concise Medical Physiology.3rd Edition. Central .
- Mahapatra, A.B.S.(2003):Essentials of Medical Physiology.3rd Edition. Current Books International.

SEC 5: BAKERY SCIENCE (CREDITS: PRACTICALS-2)

PRACTICAL

1. Basic Concepts of Bakery

a) Ingredients & processes used for preparation of

- Cream cakes and sponge cakes
- Short crust pastry
- Breads, buns and pizza base
- Cookies and biscuits

b) Product characteristics, common bakery faults and corrective measures

c) Bakery equipment- Types, selection, operations and maintenance

2. Practical Training in Baking of

- Cream cake
- Sponge cake preparations
- Short crust pastry
- Breads, buns, dinner rolls and pizza base
- Biscuits and cookies

RECOMMENDED READINGS

- Dubey, S.C. (2007). Basic Baking 5th Ed. Chanakya Mudrak Pvt. Ltd.
- Raina et.al. (2010). Basic Food Preparation-A Complete Manual. 4rd Ed. Orient Black Swan Ltd.
- Khanna K, Gupta S, Seth R, Mahna R, Rekhi T (2004). *The Art and Science of Cooking: A Practical Manual*, Revised Edition. Elite Publishing House Pvt Ltd.

**SEC-6: HOME BASED CATERING
(CREDITS: THEORY:-2)**

THEORY

LECTURES

Unit 1 Introduction to Food Service

- Factors contributing to the growth of food service industry **4**
- Kinds of food service establishments

Unit 2 Food Production

12

- Menu planning: Importance of menu, Factors affecting menu planning, Menu planning for different kinds of food service units
- Food Purchase and Storage
- Quantity Food production: Standardization of recipes, quantity food preparation techniques, recipe adjustments and portion control
- Hygiene and Sanitation

Unit 3 Resources

3

- Money
- Manpower
- Time
- Facilities and equipment
- Utilities
-

Unit 4 Planning Of A Food Service Unit

11

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

RECOMMENDED READINGS

- West B Bessie & Wood Levelle (1988) Food Service in Institutions 6th Edition Revised By Hargar FV, Shuggart SG, & Palgne Palacio June, Macmillian Publishing Company New York.
- Sethi Mohini (2005) Institution Food Management New Age International Publishers
- Knight J B & Kotschevar LH (2000) Quantity Food Production Planning & Management 3rd edition John Wiley & Sons
- Philip E Thangam (2008) Modern Cookery for teaching and Trade Part I & II Orient Longman
- Taneja S and Gupta SL (2001) Enterpreneurship development, Galgotia Publishing

SEC 7: NUTRITION AND FITNESS (CREDITS: THEORY-2)

THEORY

LECTURES 30

Unit 1 Understanding Fitness

7

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

Unit 2 Importance of nutrition

8

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

Unit 3 Importance of Physical activity

7

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

Unit 4 Weight Management

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

RECOMMENDED READINGS

- Wardlaw, Smith. Contemporary Nutrition: A Functional Approach. 2nd ed: 2012.Mc Graw Hill.
- Williams Melvin. Nutrition for health, fitness and sports. 2004.Mc Graw Hill
- Joshi AS. Nutrition and Dietetics 2010. Tata Mc Graw Hill.

**SEC 8: EARLY CHILDHOOD CARE AND EDUCATION
(CREDITS: PRACTICAL-2)**

PRACTICAL

1. To identify appropriate features of physical social environments that will promote all round development in young children
2. Identify, plan and record activities and methods of playful interactions to foster development in children birth –two years
3. Identify, plan and record activities and methods of playful interactions to foster development in children two -six years
4. Workshops in any two of the following
 - Understanding childhood nutrition and health
 - Developing work sheets to teach concepts
 - Enhancing social and language skills
 - Music, movement and drama for children
5. Curriculum planning and space design
6. Methods and tools to assess progress of children and programme
7. Setting up a crèche /preschool

RECOMMENDED READINGS:

- Aggarwal, J. C. (2007). *Early Childhood Care and Education: Principles and Practices*. Shipra: New Delhi.
- Arni, K. and Wolf G. (1999). *Child Art with Everyday Materials*. TARA Publishing.
- Mohanty, J. Mohanty, B. (1996). *Early childhood care and Education*. Deep And Deep Publication, New Delhi.
- Morrison, G. S. (2003). *Fundamentals of early childhood education*. Merrill/Prentice Hall: Virginia
- Singh, A. (1995). *Playing to Learn: A training manual for Early Childhood Education*. M. S. Swaminathan Research Foundation.
- Swaminathan, M. (1998). *The First five Years*. Sage Publications.

**SEC 9 : ADOLESCENTS' RELATIONS AND WELL-BEING
(CREDITS: PRACTICAL-2)**

PRACTICAL

1. Class room exercise on peer relationships
2. Understanding self as a male/female adolescent: exercise on self-reflection
3. Writing a brief biography of relationship with a close friend
4. Relations with parents and siblings- separate interviews
5. Analysis of different forms of media to understand interpersonal relationships
6. Workshops- managing emotions with reference to relationships and to learn crisis management
7. Methods of promoting well-being- yoga, self-development resources, counselling

RECOMMENDED READINGS

- Manthei, R. (1997). Counselling: The skills of finding solutions to problems. London: Routledge.
- Sharma, N. (2009). Understanding Adolescence, New Delhi: National Book Trust.
- Rice, F. P. (2007). Adolescent: Development, Relationships and Culture.
- Santrock, J. W. (2010). Life Span Development: A Topical Approach, New Delhi: Tata McGraw Hill

SEC 10: TRAINING FOR DEVELOPMENT (CREDITS-2 PRACTICAL-2)

PRACTICAL

1 Concept of Training

- Training and learning
- Types of training
- Role of training and capacity building in HRD

2 Methods and Techniques of Training

- Tools and techniques for training
- Designing and evaluation of Training Programs for different stakeholders (grassroot functionaries, managers, policy makers)

3. Training Methods and Techniques: Practice

- Develop training modules for specific target groups and learning goals.
- Agencies involved in training and development- NGOs, GOs and Corporate

RECOMMENDED READINGS

- Lyton R and Pareek U. (1990). Training for Development. New Delhi, Vistaar Publications.
- Subedi, N R, (2008). Advocacy Strategies and Approaches: A Training of Trainers Manual. International

SEC 11: ADVOCACY AND BEHAVIOUR CHANGE COMMUNICATION (CREDITS-2 PRACTICAL-2)

PRACTICAL

1: Advocacy

- Meaning, purpose and types of Advocacy
- Tools, techniques and approaches of advocacy
- Elements of an advocacy strategy
- Advocacy Planning Cycle - planning advocacy campaigns for different stakeholders

2: Behaviour Change Communication (BCC)

- Concept and relevance of BCC: BCC and Advocacy

- Approaches to BCC, types and steps of Advocacy
- BCC- Strategy design and implementation.
- Appraisal of communication action plan for BCC
- Role of BCC in promoting health, environmental sustainability, peace and human rights
- Analysis BCC campaigns for social mobilization and policy change
- BCC campaigns in core areas for stakeholders
-

RECOMMENDED READINGS

- Atkin ,C.K.& Rice, R.E. (2012) Theory and Principles of Public Campaigns. In C. Atkins & R Rice (EDS) Public Communication Campaigns. Newbury Park, CA: Sage
- Cox, R. (2006) Environmental Communications and the Public Sphere. Thousand Oaks,CA:Sage.
- Subedi, N R, (2008). Advocacy Strategies and Approaches: A Training of Trainers Manual. International

SEC 12 : TEXTILE DESIGN (CREDITS-2 PRACTICAL-2)

PRACTICAL

1. Fabric manipulation –cuts, removal of threads
2. Surface Decoration - Embroidery, Ari work, Embellishments
3. Design through color application
 - Painting
 - Dyeing- Tie and dye, Batik
 - Printing- Discharge, Resist, Block, Screen, Stencil
4. Thread structure- macramé, braiding, lace making (crochet, tatting)
5. Surface layering
 - Applique- simple, cut, felt
 - Quilting- hand and machine
 - Pleats
 - Tucks
6. Product development using the above design exploration techniques

RECOMMENDED READINGS

- Juracek, A. Judy,2000,Soft Surface, Thames & Hudson Ltd.
- Milne D'Arcy Jean,2006, Fabric Left Overs, Octopus Publishing Group Ltd.
- Singer Margo,2007, Textile Surface Decoration-Silk & Velvet, A&C Black Ltd

**SEC 13: COMPUTER APPLICATIONS IN FASHION DESIGN
(CREDITS-2 PRACTICAL-2)**

PRACTICAL

1: Basics of Design Software

- CorelDraw
- Adobe Photoshop

2: CAD in Fashion Design

- Colour
- Textures
- Silhouettes & fashion details
- Accessories

3: Fashion Design Creations through CAD

- Mood Boards with colour story and textures
- Dressing up according to themes

RECOMMENDED READINGS

- Corel Draw 9 - Manual Avanzado, ,2000, by Francisco Paz Gonzalez
- Adobe Photoshop 7.0 Classroom in a Book, 25 June 2002, by Adobe Creative Team

**SEC 14: RESOURCE MANAGEMENT AND SUSTAINABLE DEVELOPMENT
(CREDITS-2 PRACTICAL-2)**

PRACTICAL

- Introduction to concept and dimensions of sustainable development, major conferences and agreements on sustainable development - Power point presentation and group discussion
- MDG's and challenges to sustainable development (Climate and Global Change, Energy, Water Resources, Population, Economic Development, etc.); (Case study approach)
- Water/Air analysis - Lab testing and class presentation
- Experiential learning through field visit: Sewage treatment plant/ Vermicomposting unit/ Air Monitoring Laboratory/ Environment Pollution Detecting Laboratory/ Rain Water Harvesting System/ Biogas Plant/ Green Building/ Ecotel Hotel/ CPCB/ Greenhouse/ Solid Waste Management Plant/ hydro/thermal power plants/ Environmental Agencies or National Parks/ Sanctuaries/ Biosphere Reserves.
- Development of awareness programme on sustainable consumption practices for masses.
- A Survey related to environmental issues amongst the citizens: Data to be collected and analyzed statistically with suggestions for environmental management Or Secondary data collection/Case profile of any one govt. or non-govt. organization that contributed to environmental protection in India.

**SEC 15: AUTOCAD AND SPACE PLANNING
(CREDITS-2 PRACTICAL-2)**

PRACTICAL

1. Basic Concepts in Space Planning and Design: Concept of house, housing, architecture; Functions and concept of adequacy of space; Characteristics of space, principles of planning spaces; planning and designing; Types of house plans: floor, elevation, structural drawings and perspective plans; Types of houses - Row, Semi-detached, detached, independent houses or flats/apartments, multi-storeyed buildings
2. Structural components of a building- innovations and new materials: Foundation; Flooring; Roofs; Doors and Windows; lintels and arches; Staircase; Partitions and Panelling
3. Housing by-laws and symbols (architectural, plumbing, electrical, furniture), Steps in house planning, Different types of plans (site plan, layout plan, floor plan, elevation, section plan)
4. Critical Evaluation of independent houses and apartments.
5. Identification of building materials and evaluation concerning their characteristics (favourable and unfavourable features), uses and applications, cost and environment friendliness - Survey
6. Evaluation of buildings on energy efficiency parameters using green rating systems like GRIHA and LEED – Portfolio/ Field visit/ Case study
7. Observe and prepare house plans for different income groups up to 100 sq.m area (Computer aided /manual).

RECOMMENDED READINGS

- Adobe Photoshop 7.0 Classroom in a Book, 25 June 2002, by Adobe Creative Team
- AutoCAD 2012 (Manual Imprescindible / Essential Manuals), 30 June 2011, by Antonio Manuel Reyes Rodriguez

**SEC 16: SOCIAL MEDIA AND DIGITAL COMMUNICATION
(CREDITS PRACTICALS- 2)**

PRACTICAL

I: Social Media

- Social Media: concept, types, reach and access
- Assessing social media campaigns
- Designing social media campaigns for advocacy, social mobilisation, marketing and advertising

II : Digital Communication

- Digital Communication: concept, types, reach and access

- Analysis of web page designs
- Tools and methods to create digital designs for web pages

RECOMMENDED READINGS

1. Hinton, S and Larissa, H. (2013) *Understanding Social Media*, Sage Publications India
2. Lister, M, Dovey, J. and et al (2003 ed) *New Media: A Critical Introduction*, Routledge Taylor and Francis Group, London

SEC 17: BASICS OF DESIGN (CREDITS PRACTICALS- 2)

PRACTICAL

1. Drawing tools and equipment
2. Drawing forms
 - a) Dot to form
 - b) Geometric, simplified, naturalized, stylized, abstract
3. Design development by placements
4. Colour study – colour wheel, value, intensity, harmonies
5. Textures in nature and their application
6. Lines
 - Aspects and effects of lines -curved, structural, visual, illusion
7. Application of Principles of design - Proportion, balance, rhythm, emphasis and unity
8. Technical drawing of fashion details
9. Figure drawing- geometric croqui
10. Design development for fabric using any two techniques of construction for apparel and home textiles

RECOMMENDED READINGS

- Jones Owen,, (1997) *The Grammar of Ornament*, London, Parkgate Book Ltd.
- Meller S. and Elffers Joost, (1998) *Textile Designs*, London, Thames and Hudson Publications.
- Mills J. and Smith J.K, (1996) *Design Concepts*, New York, Fairchild Publications.
- Vyas Kumar H., (2000) *The Indian Context*, Ahmedabad, National Institute of Design.

SEC 18 : COMPUTER APPLICATIONS IN COMMUNICATION AND MEDIA DESIGN (CREDITS: PRACTICAL 2)

PRACTICAL

1 Computer Application Designing

- Concept of Computer and Designing

- Need of computer Application Designing in Extension and Communication
- Scope of Computer Application Designing for Extension and Communication
- Use of Computer Application Designing for Extension and Communication

2. Computer Software for Designing

Use of the following software for making IEC material and Teaching Aids

- Word Processor
- Presentation Software
- Corel Draw
- Paint
- Photoshop
- PageMaker

3. Issues in Use of Computer Designing

Issues and Challenges in use of Computer for Designing in Extension and Communication

Learning Experiences

- Preparing various IEC material with the use of different software
- Arranging expert talk on computer designing
- Viewing different computer designs.
- Preparing charts/poster/flash cards etc with the help of computer
- Preparing designed brochures, leaflets with the help of various software.
- Preparing presentation with the help of presentation software on development programmes.

RECOMMENDED READINGS

- Kihrwadkar A, Pushpanadan, (2006), Information and Communication Technology in Education, Sarup and Sons, Delhi
- Sampath K (1998), Introduction to Educational Technology, Sterling Publishers Pvt. Ltd
- Sagar Krshna (2007), ICTs and Teacher Training, Authors Press, Delhi
- Valerie Q (1998), Internet in a nutshell, Shroff Publishers and Distributors Pvt. Ltd, Delhi

**SEC 19 : INFORMATION, EDUCATION AND COMMUNICATION
MATERIALS FOR DEVELOPMENT
(CREDITS: PRACTICAL 2)**

PRACTICAL

1. Concept of IEC Material

- Meaning of IEC Material
- Importance and scope of IEC material for development.
- Different types of IEC materials for development.
- Role of IEC material for development.

2. Guidelines for Development of IEC Materials

- Selection of IEC material
 - Strength and Limitations of Various IEC materials
 - Criteria for selecting IEC material
 - IEC materials for combining for greater impact
- Developing a creative brief
 - Importance of creative brief.
 - Elements of creative brief
- Preparing prototype IEC material
 - Guidelines for developing new IEC material
 - Qualities of effective IEC material
- Pretesting the prototype of IEC material
 - Assessing the pretested results and revising IEC materials
 - Monitoring the use and impact of IEC materials.

3. Various Types of IEC Materials for Development

- Graphics and audio visual charts, posters, flashcards, flexes, flip books, pamphlets, leaflets, brochures, booklets, modules, manuals
- Mass Media: IEC materials for radio, television, newspapers and magazines
 - Radio scripts writing
 - T.V. programme scripts writing
 - News paper, magazine article writing

Learning Activities

1. Content analysis of various IEC material for development messages.
2. Designing layouts for various IEC materials
3. Writing scripts on selected developmental issues for radio, and T.V programmes.
4. Viewing and recording various types of television and radio programmes
5. Preparation of various graphic (IEC) materials
6. Identifying various IEC materials used by NGO's and GO's for development work.

RECOMMENDED READINGS

- Enderson (1972): Introduction to communication theories and practices, Cummings publishing house, California
- Bernice Hurst (1996) : The handbook of communication skills, Kogan Page Limited, London.
- Chandra A, Shah A, Joshi U (1989) : Fundamentals of teaching home science, Sterling publishers, New Delhi
- Wittich and Schuller (1967) : Audio visual materials, Havper & Row publications, London
- Keval Kumar (2010) : Mass communication in India, Jaico publishing house, Ahmedabad

SEC 20: HOUSE KEEPING (CREDITS: THEORY 2)

THEORY

LECTURES:30

Unit I Housekeeping Department

- Role of housekeeping in hospitality industry
- Layout of Housekeeping department
- Planning, organization & communication of Housekeeping activities.
- Co-ordination with other department
- Roles/responsibilities of personnel in the housekeeping department

Unit II Cleaning Activity and Pest Control

- Cleaning agents- selection and use for different surface
- Cleaning equipment- selection, care and maintenance
- Cleaning techniques- Daily, weekly, yearly-procedure for cleaning of guest room and public area
- Types of common pests and effective methods to control

Unit III In House accidents, Fire safety and First Aid

- Types of accidents commonly occur in hospitality institution, methods to avoid and/or reduce.
- Fire safety measures in the institution
- First aid for commonly occurring health problems.

Unit IV: Linen and Uniform Room

- Layout/plan and Physical features of linen and uniform room
- Types of linen and uniform, their selection
- Storage procedure for linen and uniforms
- Stock determination, control and distribution, record keeping, inventory taking
- Linen and Uniform room staff and their duties

Unit V: Laundry

- Types of laundry systems In House, contracted out and linen on hire
- Layout plan and physical features of a laundry
- Laundry procedure: Collection, sorting & making, stain removal & Prepare washing, extractions & drying, ironing & folding, inspection, packaging, storage delivery
- Laundry supplies and materials: Water, Soaps, Detergents, Bleaches, Laundry blues, Stiffening agents & Iron
- Dry cleaning procedure

Learning Activities

1. To learn room cleaning procedure). List down the daily, weekly and yearly tasks.
2. To learn the cleaning procedure and care of glass articles.
3. To learn cleaning procedure and care of metals like brass and silver articles.
4. To learn the procedure of cleaning wash basin (ceramic) and sinks (stainless steel).
5. To learn the method of cleaning lampshades, fans and other electrical fixtures.
6. To learn the method of bed making.
7. To learn the method of bathroom cleaning.
8. To learn the method of setting maid cart (trolley).
9. To learn the procedure of preparing room inspection check list.
10. To learn the method of laundering cotton, woollen, silk and synthetic garments.
11. To learn methods of removing stains from various linens and uniforms.
12. To learn method of starching linens and uniforms from different types of starches.
13. To learn the method of bleaching linens and uniforms.

RECOMMENDED READINGS

- Asler, (1970): Management of Hospitality Operations, Bobbs Merrill, London.
- Andrew Sudhir (1985): Hotel Housekeeping- training manual. Tata McGraw-Hill Publishing Co. Ltd., New Delhi.
- Charavarti, B.K.: A technical guide to Hotel Operation, Metropolitan Book Co. Pvt. Ltd., and New Delhi.
- David, M.Allen: Accommodation and cleaning service, Vol. 1 & 2. Hutchinson Publishing Group 17-21 Conway street, London.
- Gladwell Derek: Practical Maintenance of equipment for hoteliers, Licenses and caterers, Hutchinson and Co. Pvt. Ltd.
- Hurst Rosemary: Accommodation Management for Hostel and residential establishment.
- Hurst Rosemary: Service and Maintenance for Hotel and Residential establishment. William Heinemann Ltd., 10Upper Grosvenor Street, London.

SEC 21: TRAVEL AND TOURISM
(CREDITS: THEORY 2)

THEORY

LECTURES: 30

Unit I: Introduction to Travel and Tourism

- a. Meaning , Significance and History of travel & Tourism
- b. The Tourism industry its systems, components, infrastructure
- c. Types of Tourism (Ecotourism, Heritage tourism, Medical tourism, Educational tourism etc.)
Impact of tourism

Unit II : Tourism Organization & Legislation

- a. Tourism organization
 - Needs for Tourism Organization
 - International Organization
 - Government Organizations in India
 - Private Sector Organization in India
 - Non-Government Organization
 - Other important organization
- b. Tourism legislation
 - Laws pertaining to trans-board movements such as visa regulation, customers, foreign exchange, immigration.
 - Laws related food and beverages
 - Laws related to transport
 - Laws related to accommodation
 - Consumer protection laws related to health , hygiene quality
- c. Travel & tourism Department of Government- Central & states: Programmes and policies

Unit III: Travel Agent And The Tour Operator

- Travel Agent: Types of travel agencies, Functions of travel agency, How to setup travel agency ,sources of income for a Travel Agency
- The tour operator: Types of tour operators, packages tour, guides and escorts.
- Formalities and regulations for tourism: Passport And Visa, Health Regulations For International Travel, Customs Regulations, Emigration And Immigration, Taxes Paid By Travelers & Travel Insurance
- Customer service skills: Importance of customer satisfaction, Telephone Skills/etiquettes Phonetic Alphabet, City codes, Airport names and code of India and abroad, country codes and currency codes, Products Knowledge, Handling Customers Complaints

Unit IV: Itinerary planning & Tourism Marketing:

- a) Itinerary planning: Basic Information planning the itinerary Resources for planning itinerary, Calculation of Tour Cost
- b) Tourism marketing: Tourism Market segmentation, Designing a Tour Brochure, E-marketing, Guidelines for tourist

Places of Tourist Interest: Places of tourist interest at International and National level for various purposes, Guidelines for tourist.

Learning Activities

1. Learn to read railway Time Table.
2. Learn to see railway time table, flight's time table etc on internet and how to do booking, ticketing.
3. Prepare a list for places of interest in India and abroad under each type of tourism.
4. Prepare a list of tour operators working at local, National and International level.
5. Visit various tour organizers and study their set up, management and functioning.
6. Prepare brochure for places of tourist interest at local and National level. Prepare one-one brochure for at least one place falling under each type of tourism.
7. Visit airports to understand the functioning of local and International air travel.
8. Prepare itenary for tour organization.
9. Visit Hotels to see various types of accommodation facilities.
10. Prepare a brochure to express Do's and Don'ts for a tourist.
11. Visit places of tourist interest; assess their present status for their maintenance, aesthetics, services, security and expectations from the visitors and other such factors.

RECOMMENDED READINGS

- Dharmarajan.S. and R. Seth, Tourism in India-Trends and Issues, HarAnand Publications Pvt. Ltd. New Delhi, First edition.
- Gupta. S., World Tourism in New Millennium, ABD Publishers, Jaipur, First edition.
- Kamra, K.K and M.Chand, Basics of Tourism-Theory, Operation and Practice, Kanishka Publishers, New Delhi. First Edition. 2006.
- Maken. D. Strategies and Planning in Tourism and Industry, Adhyayan Publishers and Distributors, Delhi, First edition.
- Puri M. and G.Chand, Tourism Management, Pragun Publications, New Delhi. First Edition. 2006.
- Sharma. R.B., World Tourism in 21st Century, Alfa Publications, New Delhi, First edition.
- Roday .S, Biwal .A. and Joshi. V., TOURISM Operations and Management, Oxford University press publication , New Delhi, First addition 2009

SEC 22 : NUTRITION HEALTH COMMUNICATION (CREDITS: THEORY 2)

THEORY

LECTURES: 30

Unit I: Concepts and Theories of Communication in Nutrition – Health

- Definitions of concepts
- Formal – non-formal communication, Participatory communication
- Theories of NHC
- History, need and relevance of NHC in India

Unit II: The Components and Processes of NHC

- Concept of Behavior Change Communication (BCC) from imparting information to focusing on changing practices.
- Components of BCC: Sender, Message, Channel, Receiver
- Various types of communication – interpersonal, mass media, visual, verbal/ non-verbal.
- Features of successful BCC
- Market Research and Social Marketing

Unit III: Programs and Experiences of NHC global and Indian perspective

- NHC in developed and developing nations: some examples
- Evolution of NHC in India: traditional folk media to modern methods of communication.
- Traditional folk media in Gujarat and its influence on NHC.
- Communication for urban and rural environment; for target specific audience.

Unit IV: Nutrition - Health – Communication in Government Programs and NGOs

- Evolution of NHC/ IEC in Government nutrition health programs - shift in focus from knowledge gain to change in practices.
- Overview of NHC/IEC in government programs (Activities, strengths and limitations) –
 - a. NHC in ICDS
 - b. Nutritional counseling in micronutrient deficiency control programs: control of IDA, IDD, VAD.
- Strengths and limitations of NHC imparted in NGO programs

Learning Activities

1. Visit to an ongoing NHC program in ICDS: one rural, one urban. (eg: *matru mandal* meeting or *mahila mandal* meeting or nutrition week celebration .
2. Visit to a health centre (ANC clinic run by Government health department and observe quality of counseling imparted to pregnant women (especially awareness of anemia, importance of IFA). [All the above will be assessed by the students for the plus and minus points from the NHC perspective].
3. Visit to Mamta Day (one rural one urban) and observe quality of counseling being given to pregnant and lactating women, mothers of preschool children, use of Mamta card and other aspects.
4. To visit an NGO either rural or urban and observe one NHC program implemented for women, school children or adolescence (For all the above observation appropriate observation check lists will be made and used)
5. Improving the NHC-To conduct brief interviews with service providers in all the above programs and to compare the observations, discuss the strength and weakness of the NHC activities carried out.
6. Based on the above observations and interviews
 - a. To design and plan NHC sessions on a specific nutrition topic for any vulnerable group: children, adolescents, women taking into account all components of NHC.
 - b. Submit the visual, the script of the session: Hindi / Gujarati , the communication strategy and evaluation plan.
 - c. To implement one NHC session in the field and evaluate it as per guidelines provided.

RECOMMENDED READINGS

- Field guide to designing communication strategy, WHO publication-2007.
- Behaviour change consortium summary(1999-2003) www1.od.nih.gov/behaviourchange
- Communication strategy to conserve/improve Public Health., John Hopkins University-Centre for Communication programmes.
- Michael Favin and Marcia Griffiths 1999, Nutrition tool kit-09-Communication for Behaviour change in Nutrition projects. Human Development Network-The World Bank-1999
- Harvard Institute of International Development (1981) Nutrition Education in Developing Countries, New York: Oelgeschlager Gunn and Hain Publishers Inc.
- Hubley J (1993) Communicating Health. London: Teaching Aids at Low Cost,London, UK.
- Academy for Educational Development (1988). Communication for Child Survival, AED,USA.
- Facts for Life (1990). A Communication Challenge. UNICEF / WHO / UNESCO / UNFPA, UK.

SEC 23: BIOPHYSICS (CREDITS: THEORY 2)

THEORY

LECTURES: 30

Unit I: Basic aspects of biophysics

- Measurements & Units
 - a. Systems of unit
 - b. Fundamental and Derived units
 - c. Mass and Weight
 - d. Density and Specific gravity
 - e. Pressure
 - f. Energy and units
 - g. Molarity, Normality, Angstrom
- Heat and Light
 - a. Three states of matter and its conversion
 - b. Heat and temperature
 - c. Thermometer and Scales
 - d. Expansion
 - e. Specific heat
 - f. Latent heat
 - g. Modes of transfer of heat
 - h. Electromagnetic radiations and its properties
- Electricity
 - a. Sources of electricity
 - b. Ohm's law and units

- c. Calculation of using electrical energy
- d. Alternate and direct current
- e. Fuses and circuit breakers

Unit II: Biophysical Phenomena: concepts and application in the field of nutrition

- Viscosity
- Surface tension
- Adsorption
- pH and buffer
- Colloids

Unit III: Principles and Working of basic instruments

- Balances
- pH-meter
- Centrifuge
- Ovens
- Muffle furnace
- Vacuum pumps
- Pressure cookers and autoclaves
- Viscometer

Unit IV: Principles and Working of advanced Instruments

- Advanced Instruments
 - a. Colorimeters
 - b. Spectrophotometers
 - c. Fluorimetry
 - d. Chromatography
- Use of clinical equipment-Applications
 - a. DEXA
 - b. BMD
 - c. Ultrasound and Sonography
 - d. CT Scan
 - e. MRI

RECOMMENDED READINGS

- Wilson K and Walker J (1994). Principle and Technique of Practical Biochemistry. Published by Foundation Books, New Delhi.
- Neilson S (2002). Introduction to the chemical analysis of foods. Published by CBS and Distributors, New Delhi.
- Srivastava VK and Srivastava KK (1987). Introduction to Chromatography – Theory and Practice. Published by S. Chand & Co., New Delhi.
- Holma DH and Peck H (1993). Analytical Biochemistry (2nd ed.). Published By Langham Scientific and Technical, U.K.
- Pomeranz Y and MeLoan CE (1996). Food Analysis: Theory and Practice (3rd ed.). Published by CBS, New Delhi

- Raghuramulu N, Nair M and K Kalyanasundaram S (1983). A Manual of Laboratory Techniques. NIN, ICMR.
- Srivastava AK and Jain PC (1986). Chemical Analysis: An Instrumental Approach (2nd ed). Published by S. Chand Company Ltd., New Delhi.
- Peet LJ (1970). Household Equipment (6th ed.). Published by John Wiley & Sons, New York 9. Van Zante J (1970). Household Equipment Principles. Published by Prentice Hall, New York

SEC 24: LIFE SKILLS EDUCATION (CREDITS: THEORY 2)

THEORY

LECTURES: 30

Unit 1: Concept and Meaning of life skills

- Definitions and concept of life skills and life skills education.
- Importance in daily living; Criteria for using life skills.
- Evolution of Life Skills
- Core Life Skills- classification and concept
- Theoretical perspectives and models to understand life skills education.

Unit 2: Components for Planning & Organizing Life Skills Programs

A. Understanding group characteristics and needs

- Life skills in context: importance of focusing on contextual specificities and cultural ideologies as important aspects affecting individual ideas.
- Focusing on cultural practices that govern everyday life.
- Analyzing the gender nuances that exist within the group.
- Self components to imparting life skills program: critical thinking skills, decision making skills, interpersonal communication skills, coping with stress and emotions; self-management skills, etc.

B. Importance of communication in imparting life skills education

- Concept and Importance of communication
- Aspects to develop social potentials (effective listening, speaking, building and maintaining relationships, understanding group dynamics and functioning in groups, delegating responsibilities)

C. Core Approaches and Strategies to Implement Life Skills Program

- Understanding and developing self-skills/potential: self-awareness, self-esteem self-confidence, creative thinking, interpersonal skills, etc.
- Use of participatory techniques and methods: Individual exercises, Group activities, games etc.
- Communicating with the audience: receiving feedback, handling questions, etc.

D. Organizing a Life Skills Program

- Planning a need based viable life skills program (select components)
- Determining the purpose, collecting materials, organizing content.
- Getting prepared for the presentation: psychological level
- Delivering the presentation

E. Life Skills Assessment

- Scales and quantitative techniques
- Qualitative approaches

Unit 2: Life Skills and Youth Development

- Adolescence and Youth- Definitions, Conception- socio cultural perspectives
- Youth demographics and role in society
- Challenges of adolescence and youth development
- Formal and Non formal approaches to youth development
- Positive Youth Development

Learning Experiences

Students may be given several in house experiences to observe and evaluate existing life skills programs. They may also get experiences to interact with experts in the discipline through panel discussions and similar organized experiences.

- Visiting and observing Life skills education programme
- Critique formal and non-formal life skills programmes
- Evaluate approaches and activities of life skills education for different target groups

RECOMMENDED READINGS

- Agochiya D. 2010, life competencies for adolescents. Training manual for facilitators, teachers and parents. Sage Publications.
- Dakar Framework for Action,(2000).Education for All: Meeting our Collective Commitments, Dakar, Senegal
- Peace Corps, OPATS.2001, Life Skills Manual.
- Robbins S.P, Hunsaker P.L, Training in Interpersonal Skills (5th eds), PHI Learning Pvt. Ltd.
- National Aids Control Organization, 2008, Adolescence Education Programme, Life Skills Development.
- Nair. A. Radhakrishnan, (2010). Life Skills Training for Positive Behaviour , Rajiv Gandhi National Institute of Youth Development, Tamil Nadu.
- Nair .V. Rajasenan, (2010). Life Skills, Personality and Leadership , Rajiv Gandhi National Institute of Youth Development, Tamil Nadu.
- Url: multimedia.peacecorps.gov/.../pdf/.../M0063_lifeskillscomplete.pdf
- Url: www.nacoonline.org/.../AEP%20-%20Teachers%20Workbook.pdf

SEC 25: ACTIVITIES AND RESOURCES FOR CHILD DEVELOPMENT – I
(CREDITS: PRACTICAL 2)

PRACTICAL

1 Infancy and Toddlerhood

Development during the first two years is rapid and hence the topic is subdivided in four parts. Each part focuses on a particular age group that would enable caregivers to understand the specific needs of growing children. Knowledge of needs would help them to plan appropriate activities.

Introduction

- Characteristics of human childhood.
- (from state of helplessness to gradual control over body and development of understanding of immediate environment).
- Development through interaction of maturation and stimulation from environment, exploration.
- Importance and ways of meeting child's psychological needs to promote feelings of security, trust and acceptance.
 - Activities according to developments for various age groups.
- 0 – 6 months
- Activities for stimulation and sensory motor experiences with emphasis on seeing, hearing, touching, feeling sensation and movements.
- 7 – 12 months
- Integration of experiences involving more than one sense to deepen sensory – motor experiences. Promote manipulation, concept formation, communication and perceptual discrimination.
- 13 – 24 months
- Promotion of co-ordination and control of body movements, gross and fine motor skills. Strengthening concept formation, imagination and communication through language. Promotion of problem solving, environment to explore and satisfy curiosity and develop confidence.
- 25 – 36 months
- Improvement in body movement and communication skills, social skills and concept formation.

2 Creativity Concept of creativity and highlights of the role of creative expressions in overall development of children.

- Creative expressions, Meaning and definition of creativity expressions.
- Role of teacher in planning and fostering creative expressions.
- Creative expressions through a variety of media i.e. painting, printings, modeling, cutting, pasting, blocks puppetry, music movement, drama and language.

3 Art Activities

- Painting and graphics

- Painting with brush, drawing with crayons, chalk, rangoli on floor, finger painting. (Some special characteristics of this medium).
- Values, materials required, use of substitutes from indigenous materials.
- Teacher’s role in conducting activities.
- Stages in child art.
- Tearing, cutting, pasting and collage, mural
 - Values, materials required and Teacher’s role in conducting activities.
 - Development stages.
- Modelling
 - Values, special characteristics of this medium.
 - Techniques used, rolling, pressing, pinching, pasting, folding.
 - Materials required i.e. clay, dough, plasticine, thick paper folding, stocking paper on hollow objects i.e. balloon cardboard cartoons, paper machine, wire, rope.
 - Teacher’s role.
- Printing
 - Types of printing i.e. block, string, leaf stencils, spray, crumpled paper, different textured surfaces.
 - Values, materials required techniques.
 - Teacher’s role stages in printing.
- Blocks
 - Some special features of this medium.
 - Types of blocks: hollow large blocks, unit blocks and small blocks.
 - Stages in block play.
 - Values, materials and accessories for block play.
 - Teacher’s role.

4 Other materials

- Sand
 - Characteristics of the medium.
 - Values, materials required and teacher’ role.
- Water
 - Characteristics of the medium.
 - Values, materials required and teacher’ role.

5 Music and Rhythm

- Importance of music in child’s life and teacher’s role in providing appropriate experiences.
 - Criteria for selection of songs.
 - Creating environment for musical growth.
 - Developmental stages in musical activities.
 - Rhythmic movements body and with simple musical instruments.

6 Puppetry and Creative Drama

- Puppetry

- Characteristics of puppetry as a medium.
- Values of puppetry
- Kinds of puppets : finger, glove, stick, and string puppets etc.
- Basic staging techniques, use of lights, and simple sound affects in puppetry.
- Creative Drama
 - Meaning and values.
 - Techniques involved in creative drama e.g. rhythmic movements, pantomime, characterization, improvisation story building.
 - Process of scripting for puppet plays and creative drama.

Learning Experiences

- Infancy and Toddlerhood
 - A file to be prepared to list activities appropriate for age groups – 0 – 6 months, 7 – 12 months, 13 to 20 months and 25 – 36 months.
 - Students be encouraged to observe materials available in the locality.
 - Develop play materials suitable for each age group.
 - List activities, which can be used for working with different age groups :
- 0 – 6 months
 - Prepare materials and design activities for seeing, hearing touching and feeling.
 - Sensation and movement for soothing movements and exercises.
- 7 – 12 months
 - Prepare materials and design activities for touching and feeling sensation and movement, and manipulation.
- 13 – 14 months
 - Identify activities for gross motor development and prepare play materials available in the locality.
 - Prepare play materials and list activities promote manipulation sensory experiences, concepts and language.

Art Activities

- A few suggestions are given under each category as guideline students be encouraged to explore experiment with each media and understand the characteristics of each medium.
- Samples of each be included in the resource file which each student is expected to maintain along with description of values materials and technique used.
- Difficulty level of each activity be considered and decide its suitability for different age groups.
- Painting and graphics :
- Prepare a variety of brushes from different types of brooms, cotton, wool, strips of cloth, feather etc.
- Where necessary demonstration of preparation of materials required for conducting activity be included, i.e. paint with starch, paste etc.
- Painting with different brushes, crayon design given a paint wash, etching, blow painting, block painting, finger painting, Painting on wet paper, painting masks.
- Drawing with crayons, dry and wet chalk.
- 6 to 8 years.

- Wet paints, painting masks brush music.

Tearing cutting and pasting

- 3 – 5 years
Tearing with all fingers, tearing with thumb and two fingers and used in holding pencil, tearing on straight line, curved line.
- 6 – 8 years
Tearing circular rings starting from one corner of the page till center of page, Making designs.
- 3 – 5 cutting and pasting
Cutting a design, pasting, piece of paper, cloth, sticks leaves collage, mosaic.
- 6 – 8 years
Tearing and cutting designs, creating designs. Pasting mosaic, paper balls, glass pieces etc.

Modeling

- 3 – 5 years
Modeling with clay, dough, plastacine, saw dust, providing accessories.
- 6 – 8 years
Besides above medium. Modeling with straw, match sticks rope, wire, thick paper fold and clay sculpture.
Plasting papers on a balloon, when dry remove air and colour to create accessories for clay sculpture/crumbled paper pasting designs.

Printing

- Printing with strings, leaf, blocks, stencil printing, thumb, finger, spray painting.
- Keeping coins, leaves with veins below paper and gently colouring with crayon.
- Older children to make their own stencils.
- Printing on large pieces of paper (group activity).

Decorating empty plastic bottles, boxes masks etc.

Music and movements

- Learning to sign rhymes songs with actions.
- Folk songs.
- Making simple musical instruments.
- Rhythmic body movements according to different beats and sounds.
- Dancing according to rhythm.
- Musical instruments from waste like old pots, tins, sticks.
- Older children to form an orchestra.

Puppetry and Creative Drama

- Puppetry stick, singer, table top, rhythm, puppets glove puppets.

- Learning basic manipulation skills.
- Use of music, voice modulation and sound effects.
- Making sets and backgrounds.
- Scripting for short puppet play.
- Creative drama
- Body movements and co-ordination.
- Games like mirroring, blind fold and moving etc.
- Theme based dramatization
- Use of simple costumes and make-up to enhance characterization e.g. use of eye make-up to show different emotions or making simple caps and paper clothes for characters.
- Scripting simple dramatic presentation.

RECOMMENDED READINGS

- Beaty, J.J. (1996). *Preschool Appropriate Practices*. London : Harcourt Brace College Publishers.
- Carol, S. & Barbour, N. (1990). *Early Childhood Education : An Introduction : IInd Edition*.
- Contractor, M. (1984). *Creative drama and puppetry in education*, Delhi : National Book trust of India.
- Johnson, A.P. (1998). How to use creative dramatics in the classroom. *Childhood Education*, 2 – 6.
- Kaul, V. (1991). *Early Childhood Education Programme*. New Delhi : NCERT.
- Lasky, L. & Mukerjee, R. (1980). *Art Basic for Young Children*, Washington, D.C., NAEYC.
- Moomaw, S. (1984). *Discovering Music in Early Childhood*. Bostom : Allyn and Bacon, Inc.
- Swaminathan, M. (1984). *Play activities for young children*, New Delhi : UNICEF.
- Swaminathan, M. (1991). *Play Activities for Young Children* . UNICEF.
- Taylor, B.J. (1985). *A Child Goes Forth Minneapolis* : Burgess Publishing Co. (6th Ed.).

SEC 26: ACTIVITIES AND RESOURCES FOR CHILD DEVELOPMENT II (CREDITS: PRACTICAL 2)

PRACTICAL

1 Communication – Language Arts

- The unit emphasizes role of communication and experiences to be provided for language development.
- Importance of communication.
- Promotion of language skills : listening, speaking, reading and writing.
- Experiences for language development :
 - Infants and toddlers: sound games, talking, picture books, simple instructions, singing, finger plays and experiences.
 - Children from 3 – 8 years.

- Listening: Information, appreciative and critical or analytical.
- Conversation in group.
- Picture, object discussion.
- Reading and storytelling.
- Narration of stories, events in proper sequence.
- Describing observations.
- Poems, riddles.
- Following teacher's instructions.
- Opportunities for interaction with peer group.

2 Literature for Children

- Understanding need for literature for children.
- History of children's literature in India.
- Types of literature, appropriateness and criteria for selection.
- Toddlers: picture books.
- Books for preschoolers: picture books, story books, information and concept books, number and alphabet books, poems.
- Books for 6 – 8 years: Story books – fables, folk tales, fairy tales and modern fantasy. Information and concept books, i.e. how it works, tell me why, encyclopedias, poems.
- Physical characteristics of good books.
- Characteristics of good story.
- Values of storytelling.
- Techniques of storytelling: reading of story books, narration without aids but with help of modulation of voice and gestures, flash cards, flannel board, puppets.
- Criteria for selecting poems.

3 Mathematics

- Material to promote mathematical concepts :
 - Infancy and toddlerhood
Use of number vocabulary in informal, incidental learning situations e.g. more, less big small, less more, many etc. singing rhymes and action songs.
 - 3 – 5 years
- Counting: concept of cardinality, use of number rhymes, action songs and number readiness vocabulary.
- Concept of relative location.
- Concept of relative sizes.
- Concept of classification: formation of sets : objects pictures or according to other characteristics.
- Duplicating pattern, series.
- Concept of seriation – ordering objects, on any criterion, size, weight, volume etc.
- Comparison of sets of one Vs many, more Vs few or more Vs less etc. as well as equal sets.
- Identification and description of shapes.
- Using ordinals to name position in a series.

- Introducing numbers through concrete materials, oral work activities and worksheets, 1 – 9 only.
- Understand additions and subtraction using manipulative and concrete objects to illustrate simple stories.
- 6 – 8 years
 - Recognizing and reading numerals 1 – 9.
 - Place value formation of tens, hundreds using manipulatives.
 - Ordinals 1st to 20th.
 - Operations of addition, subtraction and multiplication.

4 Environmental Science and Social Studies

- Social structures – Family – School – Community.
- Social Relationships within family and in the community with special emphasis on gender equality and self.
- Various communities – their traditions and festivals – significance of celebrating festivals.
- Importance of conservation – pollution – water, food, air.
- Role of transport in modern living – brief history of transportation – use of animals for transport – means of transport on land, water, and air.
- Communication systems – from bird and messengers to post, telegraph, telephone, radios and television to computers.
- Role of teacher in sensitizing the children in becoming ware of the world around. Understand inter dependence and develop appreciation of various sections and occupations of all members and communities.

Science Activities

- What is science for young children?
- Science activities in everyday living
- Goals and Values of science experiences

Learning Experiences

- Compile songs for finger play and lullabies suitable for infants and toddlers.
- Prepare picture books for infants and toddlers.

Note: Micro teaching technique i.e. peer group teaching be used to develop teaching skills. One student will play role of teacher and others as children. At the end of the activity, the peer group will evaluate. Class can be divided in groups of 5 to 6 students.

- Microteaching for conducting group conversation.
 - Display of bulletin board for picture talk.
 - Development of questioning skills involving what, who, when, where, why questions as well as questions to give scope to children for imagination and creative expression.
- Develop riddles for language and concepts.
- Recite poems with expression and actions.
- Evaluate a few stories.
- Micro teaching for story telling with and without teaching aid.

- Teaching aids for storytelling.
- Preparation of materials and games to promote various mathematical concepts.
- Plan field trips to various places, institutions, parks, Zoo, Dams, Television stations, post office etc.
- Write stories and songs reinforcing messages of hygiene and cleanliness.
- Collect traditional stories – folk songs from different parts of the country and different communities.
- Prepare a file of activities that can be conducted in the area of science, maths and language using materials available from nature.
- Games – compilation of outdoor games. Games for cognitive development.

Evaluations

Two theory tests and two practical assignments

RECOMMENDED READINGS

- Adler, S., Farrar, C. (1983). A curriculum guide for developing communication skills in preschool Child, Illinois: Thomas publications.
- Batra, P. (2010) Social Science learning in schools. Sage Publications.
- Beghetto, R., Kaufman, J. (2010) Nurturing creativity in classroom. Cambridge
- Bruke, E. (1990). Literature for the young child, Needham Heights: Allyn and Bacon.
- Carol, S. & Barbour, N. (1990). Early Childhood Education : An Introduction, IInd Edition.
- Chambers, P. (2008) Teaching mathematics. Sage publications.
- Dave, A. (1987). Pre-Mathematics Experiences for Young Children.
- Deviries, R., Kohlberg, L. (1987). Programs of early education, New York: Longman.
- Gelman, R. Gallistel, C.R. (1986). The child’s understanding of numbers, Cambridge: Harvard university press.
- Huck, C. (1971). Children’s literature in elementary school. New York: Holt, Rihehart and Winston.
- Kaul, V. (1991). Early Childhood Education Programme, New Delhi: NCERT.
- Krishna Kumar (1986). The child’s language and the teacher, New Delhi: UNICEF.
- Krishna, S., Menezes, J. and Jayaram, K. (1993). Set of ten books on environment studies. New Delhi 110 016. The schools Environment Studies Network, C-1/4, Safdarjung.
- Kurien, S. (1988). Helping children learn, Bombay. Orient Longman.
- Lays, Pamela (1985). Teaching through environment, London: Allyn and Bacon.
- Leeper, S. Witherspoon, R., Day B. (1984). Good schools for young children, New York: MacMillan.
- Liebeck, Panmala, How children learn mathematics, London : Penguin.
- Lloyd, I., Richardson, K. (1980). A mathematics activity for early childhood and special education, New York : McMillan publishing company.
- Margelin, E. (1982). Teaching young children at school and home, New York: MacMillan.

- Maxim, G. (1985). The very young. Belmont, California: Wadsworth, publishing company.
- Robinson, H. (1985). Exploring Teaching. London: Allyn and Bacon.
- See Felett, C. (1980). A curriculum for preschools, Columbus: Charles E. Merrill publishing company.
- Swaminathan, M. (1984). Play activities for young children, New Delhi: UNICEF.
- Swaminathan, M. (1991). Play Activities for Young Children: UNICEF.
- Tarang : Ullasmay Abhyas (1995).
- Taylor, B.J. (1988). A child goes Forth. (6th ed.). Minneapolis: Burgess Publishing Co.

**SEC 27: PRODUCT DEVELOPMENT IN TEXTILES AND APPAREL
(CREDITS: PRACTICAL 2)**

PRACTICAL

1. Concept Development

- Meaning and importance
- Key elements in Product designing- fashion trends , product function and added value

2. Design Instigation

- Developing creative idea based on concept
- Making flat sketches of developed idea

3. Analysis and Selection

- Sourcing and Procurement-Concept and Definitions
- Need and methods of Sourcing, Major producers and suppliers of raw materials- Dyes, Yarns, Fabrics and Trims
- Review of designs for individual strengths relation to the concept and their estimated cost
- Finalizing the blue print of the final product

4. Development Process

- Conceptualization of the details of the product
- Prepare/ develop specification sheets of the selected product

5. Fabrication

- Construction of the final product
- Display of the article

6. Cost Analysis

- Economic analysis of products
 - Calculation of monetary values of different determinants of total product cost
 - Labour cost calculation

Learning Experiences

- Students will visit various production unit and analyze product development process
- Develop prototypes of good quality marketable products

RECOMMENDED READINGS

- Frings G.S. (2001) “Fashion from Concept to Consumer” Prentice Hall, New Jersey.
- Gordon L.J. (1961) Economics for Consumer, New York, American Book Company.
- Sundram & Rudradatt (1986) Indian Economy, Sultanchand & Sons.
- Wingate J.W., Schaller E.O. & Miller F. L.(1972) Retail Merchandise Management, Prentice Hall, New Jersey.

SEC 28: IMAGE STYLING (CREDITS: PRACTICAL 2)

PRACTICAL

1. Physical traits and personality
 - Body and figure types
 - Body proportion
 - Figure type & problems
 - Personality
2. Figure analysis – identifying you physical self and facial features
3. Physical attractiveness – its determinants and social effects
4. Concepts and principles of design
 - Effects of design elements and principles on clothing
 - Fashion fundamentals
 - Development of future fashion trends of garments and accessories
5. Personality and dressing
 - Principles of illusion dressing
 - Personal style expression
 - Etiquette and personal grooming
 - Colour and personal style analysis
6. Identifying clothing needs and wardrobe planning
 - Wardrobe analysis and organization
 - Wardrobe style identification
 - Organization and categorization of wardrobe
 - Elements of a basic wardrobe
 - Tips of garment maintenance

Personal shopping

- Preview of apparel / accessory stores ad brands in context to style, size and budget
- Optimizing wardrobe

RECOMMENDED READINGS

- Funder, D.C. 2001, The Personality Puzzle (2nd ed), New York: W.W. Norton
- Phares, J.E. 1991, Introduction to Personality (3rd ed), New York: Harper Collins

SEC 29: FASHION ILLUSTRATION (CREDITS: PRACTICAL 2)

PRACTICAL

1. Introduction to fashion illustration
 - vocabulary
 - tools
 - body proportion and balance
2. Human anatomy
 - Developing a fashion figure male, female and children
 - Basic figure drawing varying postures
 - Rapid sketching, working from photograph
 - Sketching body features
 - Stylization of model figures
3. Creating textures using different mediums
 - Collecting and studying textures
 - Working with different media and techniques to simulate textures
4. Rendering fabric textures
 - Sketching silhouettes in various fabric textures (fur, satin, denim, tissue, silk, chiffon, knits, plaids, corduroy and others)
5. Garment types and its features in appropriate textures and styles
 - Garment details (neckline, sleeves, pockets etc.)
 - Sketching garments
 - Design a costume for a specific event or profession

RECOMMENDED READINGS

- Abling, B. 2001, Fashion Rendering with Colour, Illustrated ed. Prentice and Hall.
- Ireland, P.J. 1996, Fashion Design Illustration- Men, B.T. Batsford, London.
- Ireland, P.J. 2003, Introduction to Fashion Design, B.T. Batsford, London.

**SEC 30: NGO MANAGEMENT & CSR
(CREDITS: THEORY 2)**

THEORY

LECTURES:30

Unit 1 Concept of NGO

- Meaning of NGO and GO
- Difference between Government Organizations and NGO
- Characteristics of good NGO
- Structure of NGO
- Functions of NGO
- Historical Perspective of NGO
- Advantages of NGO
- Present status of NGO
- Contribution of NGO in the Development

Role of Development Communicator in developing NGO

Unit 2 Starting of NGO

- Steps for starting NGO
- Registration of NGO
- Selection of Personnel
- Training of Personnel
- Proposal writing under NGO
- Identifying Funding agencies
- Resource Mobilization
- Planning, Implementation and Evaluation strategy under NGO
- Documentation
- PR in NGO

Unit 3: NGO Management

- Organizational types and structures
- Managing people and teams in NGOs
- NGO management competencies
- Applying NGO principles and values
- Accountability and impact assessment for NGOs

Unit 4 Problems of NGO

- Training
- Recruitment
- Funding
- Resource Mobilization
- Documentation

Learning Experiences

1. Visit of Local NGO
2. Studying the Annual report of NGOs
3. Studying the ongoing Activities
4. Studying the problems

RECOMMENDED READINGS

- S. Chandra, Guidelines for NGO Management in India (2003), Published by Kanishka Distributors, New Delhi
- D. Lewis, Management of Non Governmental Development Organization (2001), Second Edition, Published by Routledge, Newyork.
- A. Abraham, Formation and Management of NGOs (2003), Third Edition, Published by Universal Law Publishing Co. Pvt Ltd., New Delhi.
- Sundar, P. 2013, Business and Community: The Story of Corporate Social Responsibility in India , New Delhi, Sage Publication.
- Aggarwal, S.2008, Corporate Social Responsibility in India, Sage publication Pvt. Ltd.