

**Controller of Examinations**  
**SAMBALPUR UNIVERSITY**  
**JYOTI VIHAR, BURLA**  
Sambalpur (Odisha), PIN- 768 019



**PHONE and Fax:0663-2430806**  
**e-mail: [coesuniv@gmail.com](mailto:coesuniv@gmail.com)**

**Urgent**

**( Both by post and by e- mail)**

No. 7785 / Acd.-I

Dated: 26/10/16

To

***The Principals,***

(All the Affiliated Colleges under Sambalpur University having  
Three Year Degree Courses excluding Autonomous Colleges.)

**Sub: Syllabus & Implementation of CBCS pattern Arts/Science/Commerce (Pass and  
Hons.) from the Academic Session 2016-17.**

**Ref :- This office letter No 5314/ Acd.-I dated 21.7.16 and letter No. 5970/Acd.-I  
dated 8.8.16.**

Sir,

In continuation to the letters and the subject cited above, I am directed to intimate you that the Vice- Chancellor has been pleased to approve the syllabus for Courses / papers related to **Home Science** for CBCS + 3 courses degree B.A. (Both Pass & Hons. ) examinations under 6 (15) of O.U. Act -1989 giving it effect from the Academic Session, 2016-17. The detail Courses of Studies is enclosed herewith for your reference and necessary action.

**This may kindly be noted that it is the final syllabus for *Home Science* subject/ papers under CBCS pattern. It may be made available to teachers and students concerned. Further you are requested to ensure teaching of the courses in your colleges accordingly.**

**Any error and omission etc. may kindly be intimated to this office.**

. Any queries on the matter may be made through e-mail: [coesuniv@gmail.com](mailto:coesuniv@gmail.com).

Thanking you,

Yours faithfully,

Encl: *As above*

*[Signature]*  
26/10/16  
**Controller of Examinations**  
*[Signature]*

**P.T.O.**

Memo No. 7786 /Acad.-I(BOS),

dtd. 26/10/16

**Copy forwarded with enclosure for information and necessary action to:**

1. The Chairman, Post Graduate Council, Sambalpur University.
2. The H.O.D., P.G. Department of *Home Science*, Sambalpur University.
3. The Director, College Development Council, Sambalpur University.
4. The Director, Directorate of Distance and Continuing Education, Sambalpur University.
5. The Co-ordinator, Private Examination Cell, Sambalpur University.
6. Asst. Registrar (Examination), Sambalpur University.
7. Programmer, University Computer Unit, Sambalpur University.
8. Asst. Controller of Examinations, Sambalpur University.
9. Section Officer / Assistant –in- Charge, *e – Governance Cell*, Sambalpur University with request to provide all the materials in the official web- site accordingly. ( as + 3 cbcs- syllabus – *Home Science –Final*)
10. Section Officers, Computer Unit, E.G.-I, EG-II, E.C-I, EC-II, EC-VI Sections.
11. Five spare Copies for Academic-I Sections with enclosure.

*B.K. Das*  
26/10/16  
Controller of Examinations  
*B.K. Das*

Memo No. 7787 /Acad.-I(BOS),

dtd. 26/10/16

**Copy forwarded without enclosure for information and necessary action to:**

1. *The Dy. Director, e – Governance Cell*, Sambalpur University with request for needful to provide all the materials in the official web- site accordingly .
2. P.A. to the Vice- Chancellor, Sambalpur University.
3. P.A. to the Registrar, Sambalpur University.
4. P.A. to the Controller of Examinations, Sambalpur University.

*B.K. Das*  
26/10/16  
Controller of Examinations  
*B.K. Das*

Sn//-

**SAMBALPUR UNIVERSITY**  
**COURSES OF STUDIES FOR THE THREE**  
**YEAR DEGREE COURSE**

**OF**

**B.A./ B.Sc. (Hons) & Pass Home Science**  
**Choice Based Credit System**

**2016**

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## B.SC. (HONS) HOME SCIENCE

Contd...

VI	CC-13 Theory	Research Methodology in Home Science	4
	CC-13 Practical	Research Methodology in Home Science Practical	2
	CC-14 Theory	Socio Economic Environment	4
	CC-14 Practical	Socio Economic Environment Practical	2
	DSE -3 Theory	DSE -3 Theory	4
	DSE -3 Practical	DSE -3 Practical	2
	DSE -4 Theory	DSE -4 Theory	4
	DSE -4 Practical	DSE -4 Practical	2
		<b>Total</b>	<b>140</b>

**\*Any 4 DSE, 2 SEC AND 4 GE to be picked up by the student from the pool.**

## Preamble

Home Science has contributed a great deal towards national development by training students to take up leadership roles in extension and community outreach programs. The students are encouraged to develop a scientific temper. Familiarizing them with the use of newer technologies, methods in family and community linkages, and sustainable use of resources for human development are the hall mark of education in Home Science. As a discipline Home Science integrates the ingredients of the sciences, social sciences and technology to facilitate the study of and enhance the quality of human life. Its approach is therefore inherently interdisciplinary. Traditionally, Home Science has adopted an ecological approach in its curriculum that engages the student through teaching, research and extension. The education process in Home Science underscores the importance of the individual's dynamic relationship with his/her family, community and society as a whole, as well as with the resources in the environment. Higher education learning in Home Science subjects provides students the opportunity to sharpen their capacities with a sense of social responsibility.

In contemporary times, Home Scientists promote capacity building of individuals and communities for social and economic empowerment. They train community women and youth from various strata of society for entrepreneurship. Many Home Scientists have done exceptionally well as entrepreneurs themselves. They do not remain job seekers but have also become job creators. They gain and provide employment in research organizations, food and textile industries, dietetic practice, education and child development domains, accreditation of green buildings, strategic planning and communication technologies. Keeping in view the growing aspirations of today's youth and the capacity of Home Science discipline to deliver, the present 3-year Choice Based Credit System curriculum has been drawn up.

Years of national and international experience in the field has contributed to the wisdom that all the five windows of opportunity that Home Science offers be opened for i.e. Food and Nutrition, Human Development and Childhood Studies, Resource Management and Design Application, Development Communication and Extension and Fabric and Apparel Sciences. In this course, the students will learn the fundamental principles and foundations of all the five areas. They are expected to internalize the principle of a Home Scientist, that is, to give back to the community from which they draw, for sustainable development. This is a major contribution of Home Science in both developed and developing societies.

The University Grants Commission's model curriculum of Home Science reflects a similar philosophy.

The objectives of the B.Sc. (Hons.) Home Science Honours course are:

- To understand and appreciate the role of interdisciplinary sciences in the development and well-being of individuals, families and communities
- To learn about the sciences and technologies that enhance quality the life of people
- To acquire professional and entrepreneurial skills for economic empowerment of the student in particular, and community in general
- To develop professional skills in food, nutrition, textiles, housing, product making, communication technologies and human development
- To take science from the laboratory to the people

<b>CORE COURSE (14)</b>	<b>Ability Enhancement Compulsory Course (AECC) (2)</b>	<b>Skill Enhancement Course (SEC) (2)</b>	<b>Elective: Discipline Specific (4) DSE</b>	<b>Elective: Generic (GE) (4)</b>
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### B.Sc. (Hons.) Home Science

I	CC 1: Human Development I: The Childhood Years	English/ EVS			GE 1
	CC 2: Food and Nutrition				
II	CC 3: Dynamics of Communication & Extension	English/ EVS			GE 2
	CC 4: Resource Management				
III	CC 5: Introduction to Textiles		SEC 1		GE 3
	CC 6: Communication Systems and Mass Media				
	CC 7: Personal Finance & Consumer Studies				
IV	CC 8: Human Development II: Development in Adolescence and Adulthood		SEC 2		GE 4
	CC 9: Nutrition: A Life Cycle Approach				
	CC10: Fashion Design Concepts				
V	CC11: Life Sciences			DSE 1	
	CC12: Physical Sciences			DSE 2	
VI	CC 13: Research Methodology in Home Science			DSE 3	
	CC14: Socio Economic Environment			DSE 4	

**CORE COURSES (14 Courses) Total Credits – 84**

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

**CC 1: Human Development I: The Childhood Years** Theory 4 credits + Practical 2 credits

**CC 2: Food and Nutrition** Theory 4 credits + Practical 2 credits

**CC 3: Dynamics of Communication and Extension** Theory 4 credits + Practical 2 credits

(2)

- CC 4: Resource Management** Theory 4 credits + Practical 2 credits
- CC 5: Introduction to Textiles** Theory 4 credits + Practical 2 credits
- CC 6: Communication Systems and Mass Media** Theory 4 credits + Practical 2 credits
- CC 7: Personal Finance & Consumer Studies** Theory 4 credits + Practical 2 credits
- CC 8: Human Development II: Development in Adolescence and Adulthood** Theory 4 credits + Practical 2 credits
- CC 9: Nutrition: A Life Cycle Approach** Theory 4 credits + Practical 2 credits
- CC10: Fashion Design Concepts** Theory 4 credits + Practical 2 credits
- CC11: Life Sciences** Theory 4 credits + Practical 2 credits
- CC12: Physical Science** Theory 4 credits + Practical 2 credits
- CC13: Research Methodology in Home Science** Theory 4 credits + Practical 2 credits
- CC14: Socio Economic Environment** Theory 4 credits + Practical 2 credits

**DISCIPLINE SPECIFIC ELECTIVE (4 Courses) Total Credits – 24**

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

- DSE 1: Food Science** Theory 4 credits + Practical 2 credits
- DSE 2: Nutritional Biochemistry** Theory 4 credits + Practical 2 credits
- DSE 3: Theories of Human Development** Theory 4 credits + Practical 2 credits
- DSE 4: Childhood in India** Theory 4 credits + Practical 2 credits
- DSE 5: Communication For Development: BCC** Theory 4 credits + Practical 2 credits
- DSE 6: Extension for Development** Theory 4 credits + Practical 2 credits
- DSE 7: Textile Processing** Theory 4 credits + Practical 2 credits
- DSE 8: Indian Textile Heritage** Theory 4 credits + Practical 2 credits
- DSE 9: Entrepreneurship Development & Enterprise Management** Theory 4 credits + Practical 2 credits
- DSE 10: Interior Design & Decoration** Theory 4 credits + Practical 2 credits
- DSE 11: Therapeutic Nutrition** Theory 4 credits + Practical 2 credits
- DSE 12: Public Nutrition** Theory 4 credits + Practical 2 credits
- DSE 13: Child Rights and Gender Justice** Theory 4 credits + Practical 2 credits
- DSE 14: Childhood Disability and Social Action** Theory 4 credits + Practical 2 credits
- DSE 15: Gender, Media and Society** Theory 4 credits + Practical 2 credits
- DSE 16: Programme Design and Evaluation** Theory 4 credits + Practical 2 credits
- DSE 17: Apparel Marketing and Merchandising** Theory 4 credits + Practical 2 credits
- DSE 18: Apparel Production** Theory 4 credits + Practical 2 credits
- DSE 19: Ergonomic Design** Theory 4 credits + Practical 2 credits
- DSE 20: Human Resource Management** Theory 4 credits + Practical 2 credits
- DSE 21: Space Planning and Design** Theory 4 credits + Practical 2 credits
- DSE 22: Physiology and Promotive Health** Theory 4 credits + Practical 2 credits
- DSE 23: Advertising and Public Relation** Theory 4 credits + Practical 2 credits
- DSE 24: Non Formal, Adult and Life Long Education** Theory 4 credits + Practical 2 credits
- DSE 25: Basics of Interior Design and Hospitality Management** Theory 4 credits + Practical 2 credits
- DSE 26: Basics of Nutrition Epidemiology and Anthropology** Theory 4 credits + Practical 2 credits
- DSE 27: Commercial Clothing** Theory 4 credits + Practical 2 credits
- DSE 28: Pattern Making and Draping** Theory 4 credits + Practical 2 credits

**SKILL ENHANCEMENT COURSES (2 Courses) Total Credits – 4**



(2 Credits each-Theory 2 credits or Theory 1 credit+ Practical 1 credit or Practical 2 Credits)

- SEC 1: Home Based Catering** Theory 2 credits  
**SEC 2: Maternal and Child Nutrition** Theory 2 credits  
**SEC 3: Early Childhood Care and Development** Practical 2 credits  
**SEC 4: Self Development and Well-Being** Practical 2 credits  
**SEC 5: Training and Capacity Building** Practical 2 credits  
**SEC 6: Advertising and Social Marketing** Practical 2 credits  
**SEC 7: Surface Ornamentation** Practical 2 credits  
**SEC 8: CAD in Textiles and Apparel** Practical 2 credits  
**SEC 9: Resources and Sustainable Development** Practical 2 credits  
**SEC 10: Autocad and Spatial Planning** Practical 2 credits  
**SEC 11: Understanding Psychology** Theory 2 credits  
**SEC 12: Computer Applications in Communication and Media Design** Practical 2 credits  
**SEC 13: Information, Education and Communication Material for Development** Practical 2 credits  
**SEC 14: House Keeping** Theory 2 credits  
**SEC 15: Travel and Tourism** Theory 2 credits  
**SEC 16: Nutrition Health Communication**  
**SEC 17: Biophysics** Theory 2 credits  
**SEC 18: Life Skills Education** Theory 2 credits  
**SEC 19: Activities and Resources for Child Development – I**  
Practical 2 credits  
**SEC 20: Activities and Resources for Child Development II** Practical 2 credits  
**SEC 21: Product Development in Textiles and Apparel** Practical 2 credits  
**SEC 22: Image Styling** Practical 2 credits  
**SEC 23: Fashion Illustration** Practical 2 credits  
**SEC 24: NGO Management & CSR** Theory 2 credits

**GENERIC ELECTIVES (For other disciplines) Total Credits -24**  
(6 Credits each -Theory 4 credits + 2 Practical credits or Theory 5 credits + 1 Tutorial)

- GE 1: Human Nutrition** Theory 4 credits + 2 Practical credits  
**GE 2: Nutrition: A Lifespan Approach** Theory 4 credits + 2 Practical credits  
**GE 3: Entrepreneurship for Small Catering Units** Theory 4 credits + 2 Practical credits  
**GE 4: Current Concerns in Public Health Nutrition** Theory 5 credits + 1 Tutorial  
**GE 5: Gender and Social Justice** Theory 5 credits + 1 Tutorial  
**GE 6: Child Rights and Social Action** Theory 5 credits + 1 Tutorial  
**GE 7: Care and Well-Being in Human Development** Theory 4 credits + 2 Practical credits  
**GE 8: Adolescent Relationships** Theory 4 credits + 2 Practical credits  
**GE 9: Media, Culture and Society** Theory 5 credits + 1 Tutorial  
**GE 10: Gender, Media and Society** Theory 5 credits + 1 Tutorial  
**GE 11: Behaviour Change Communication** Theory 4 credits + 2 Practical credits  
**GE 12: Information and Communication Technologies for Development** Theory 4 credits + 2 Practical credits  
**GE 13: Fashion: Design and Development** Theory 4 credits + 2 Practical credits  
**GE 14: Fashion Accessories** Theory 4 credits + 2 Practical credits  
**GE 15: Textiles: Care and Conservation** Theory 4 credits + 2 Practical credits  
**GE 16: Appreciation of Textile Crafts** Theory 4 credits + 2 Practical credits

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**GE 17: Entrepreneurship and Enterprise Management** Theory 4 credits + 2 Practical credits

**GE 18: Interior Design** Theory 4 credits + 2 Practical credits

**GE 19: Facilities and Service Management** Theory 5 credits + 1 Tutorial

**GE 20: Training and Development** Theory 5 credits + 1 Tutorial

**Total Credits 84 Core+ 24 DSC + 4 SEC+ 4 AECC+ 24 GE= 140**

## CORE COURSES

### Core Course 1 : HUMAN DEVELOPMENT I: THE CHILDHOOD YEARS

(CREDITS: THEORY-4, PRACTICAL-2)

#### THEORY

LECTURES: 60

#### Unit I : Introduction to Human Development

15

- Definition & History of Human Development
- Scientific Studies of Child Development
- ~~• Foundations of the Developmental Pattern~~
- Principles of Growth and Development

#### Unit II : Prenatal Development, Birth and the Neonate

15

- Reproductive health
- Conception, Pregnancy and Birth
- Capacities and care of the new born

#### Unit III : Infancy and Preschool years

15

- Physical and Motor development
- Social and Emotional development
- Cognitive and Language development

#### Unit IV : Middle Childhood years

15

- Physical and motor Development
- Social and Emotional development
- Cognitive and Language development

#### PRACTICAL

##### 1. Methods of study and their use

- Interview
- Narratives

##### 2. Cultural practices related to pregnancy and infancy

##### 3. Plan and develop activities to facilitate development in different domains. Preparation of material for parents children (poster, toys etc )

##### 4. Study the role of salient others in child's life- familial and non-familial

##### 5. Survey of selected resources for family and children in the community and the market

**RECOMMENDED READINGS**

- Bee. H. (1995). The Developing Child. Harper Collins.
- Berk, L. E. (2007). Development through the lifespan. Delhi: Pearson Education.
- Rice. F. P. (1998). Human Development: A lifespan approach. New Jersey: Prentice Hall.
- 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.

**Core Course 2: FOOD AND NUTRITION  
(CREDITS: THEORY-4, PRACTICAL-2)**

**THEORY**

**LECTURES:60**

**Unit I: 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 II: Nutrients** **20**

Functions, Dietary Sources and clinical manifestations of deficiency/ excess of the following nutrients:

- Energy, Carbohydrates, lipids and proteins
- Fat soluble vitamins-A, D, E and K
- Water soluble vitamins – thiamin, riboflavin, niacin, pyridoxine, folate, vitamin B<sub>12</sub> and vitamin C
- Minerals – calcium, iron, zinc and iodine

**Unit III: Methods of cooking** **5**

- Dry, moist, frying and microwave cooking
- Advantages, disadvantages and the effect of various methods of cooking on foods

**Unit IV: Food Groups** **25**

- Structure, composition, Products, nutritional contribution, selection 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
- Spices and herbs

- Beverages

**Unit V: Nutrient losses in cooking and enhancing the nutritional quality of foods-**

- Supplementation, Germination, Fermentation, Fortification and GM foods **5**

**PRACTICAL**

1. Weights and measures; preparing market order and table setting **1**
2. Food preparation, understanding the principals involved, nutritional quality and portion size **13**

- **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.
- **Fermented products:** idli, dosa, appam, batura, kulcha, dhokla

**RECOMMENDED READINGS**

- Bamji MS, Krishnaswamy K, Brahmam GNV (2009). Textbook of Human Nutrition, 3<sup>rd</sup> 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, New Delhi. 2015
- 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.

**Core Course 3: DYNAMICS OF COMMUNICATION AND EXTENSION  
(CREDITS: THEORY-4, PRACTICAL-2)**

**THEORY**

**LECTURES 60**

**Unit I: 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 Organisations, Advertising and Public relations
- Communication and mainstream media- newspaper, radio, television and Cinema, ICTs and web based communication
- Communication for social change

**Unit II: 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 III: Communicating Effectively** **8**

Concept, nature and relevance to communication process:

- Empathy
- Persuasion
- Perception
- Listening

**Unit IV: 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 4: RESOURCE MANAGEMENT**  
**(CREDITS: THEORY-4, PRACTICAL-2)**

**THEORY**

**LECTURES: 60**

**Unit I: Introduction to Resource Management**

**18**

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

**Unit II: 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 III: 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. **3**
  - SWOT analysis-who am I and Micro lab
  - Building Decision Making abilities through management games
3. Preparation of time plans for self and family **3**
4. Time and Motion Study **3**
5. Event planning ,management and evaluation-with reference to **2**
  - 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 5: INTRODUCTION TO TEXTILES  
(CREDITS: THEORY-4, PRACTICAL-2)**

<b>THEORY</b>	<b>LECTURES: 60</b>
<b>Unit I: Introduction to textile fibres</b>	<b>8</b>
- Morphology of textile fibres	
- Primary and secondary properties	
- Fibre classification	
<b>Unit II: Production, chemistry, properties and usage of fibres</b>	<b>16</b>
- Natural fibre: Cotton, Flax, Silk and Wool	
- Man-made fibers: Rayon, Polyamides, Polyester, Acrylic, Olefins (Polyethylene and Polypropylene) and elastomeric fibres	
<b>Unit III: Production and properties of Yarns</b>	<b>10</b>
- Yarn construction:	
Mechanical Spinning (Cotton system, Wool system, Worsted system)	
Chemical Spinning (Wet, Dry, Melt)	
- Types of yarns: Staple and Filament, Simple yarns, Complex yarns	
- Yarn Properties-Yarn Numbering, Yarn Twist	
- Textured yarns: Types and properties	
- Difference between Threads and Yarns	
- Blends: Types of blends and purpose of blending	
<b>Unit IV: Techniques of fabric construction</b>	<b>12</b>
<b>Weaving</b>	
- Parts of a loom	
- Operations and motions of the loom	
- Classification of weaves- construction, characteristics, usage	
<b>Knitting</b>	<b>6</b>
-Classification of knits	
-Construction and properties of warp and weft knits	
<b>Non-wovens</b>	<b>3</b>
-Types	
- Construction	



- Properties and usage

**Unit V: Basics of Wet Processing** **5**

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

**PRACTICAL**

- |  |   |
|--|---|
| 1. Fibre Identification tests –Visual, burning, microscopic and chemical                                 | 2 |
| 2. Yarn Identification – Single, ply, cord, textured, elastic, monofilament, multifilament and spun yarn | 2 |
| 3. Thread count and balance  | 2 |
| 4. Dimensional stability   | 1 |
| 5. Weaves- Identification and their design interpretation on graph                                       | 3 |
| 6. Fabric analysis of light, medium & heavy weight fabrics (five each)                                   | 2 |
| - Fibre type   |   |
| - Yarn type  |   |
| - Weave  |   |
| - GSM  |   |
| - End use  |   |
| - Trade name   |   |
| 7. Tie and Dye   | 3 |

**RECOMMENDED READINGS:**

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

**Core Course 6: COMMUNICATION SYSTEMS AND MASS MEDIA  
(CREDITS: THEORY-4, PRACTICAL-2)**

**THEORY**

**LECTURES 60**

**Unit I: Self and Communication**

**8**

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

26

**Unit II: Interpersonal Communication** **12**

- 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 III: 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 IV: Mass Media** **15**

- 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**

- |   |   |
|---|---|
| 1. Know yourself exercises.   | 3 |
| 2. Studying group dynamics in organizations- formal and informal.     | 3 |
| 3. Audience analysis- readership, listenership and viewership studies | 5 |
| 4. Content analysis of mass media                                     | 4 |

**RECOMMENDED READINGS**

- Devito, J. (1998) Human Communication. New York: Harper & Row.
- Barker, Larry Lee. (1990) Communication. Eaglewood Cliffs, New Jersey: Prentice Hall.
- McQuail, D. (2000) Mass Communication Theories. London: Sage Publications
- Baran, Stanley J (2009). Introduction To Mass Communication, McGraw hill medical publishing
- Baran, Stanley J (2014). Mass Communication Theory, Wadsworth Publishing
- Vivian, J (2012). The Media Of Mass Communication, Pearson
- Dominick, Joseph R. (2012). Dynamics of mass communication: media in transition , McGraw hill education

**Core Course 7: PERSONAL FINANCE AND CONSUMER  
STUDIES (CREDITS: THEORY-4, PRACTICAL-2)**

**THEORY**

**LECTURES: 60**

**Unit I: 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 II: 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 III: 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
- Regulations on Food Labelling and Claims: FSSAI, Codex for consumers

**PRACTICAL**

1. Evaluation and designing of advertisements in the print media including products, services and social ads. **3**
2. Evaluation and designing of informative and attractive labels of different type of food products. **3**
3. Case study of banks and post offices to understand their services and **3**

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- products, Learning to fill different bank forms
- 4. Analysis of consumer redressal through case study approach under CPA. **3**
- 5. Food adulteration tests **2**

### **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 8: HUMAN DEVELOPMENT II : DEVELOPMENT IN ADOLESCENCE AND ADULTHOOD (CREDITS: THEORY-4, PRACTICAL-2)**

#### **THEORY LECTURES :60 Unit I: Introduction to Adolescence**

- Developmental tasks during Adolescence
- Puberty, sexual maturity, nutrition, health, and psychological well-being
- Self and identity
- Family and peer relationships
- Adolescent interface with media

#### **Unit II: Cognitive, Language and Moral development**

- Perspectives on cognitive development
- Development of intelligence and creativity
- Adolescent language
- Adolescent morality

#### **Unit III: Introduction to Adulthood**

- Definitions, transition from adolescence to adulthood
- Developmental tasks of adulthood
- Physical and physiological changes from young adulthood to late adulthood
- Significance of health, nutrition, and well being

#### **Unit IV: Socio-emotional and Cognitive development**

- Diversity in roles and relationships
- Marriage-contemporary trends
- Parenting and grand parenting

## PRACTICAL

1. To study physical and sexual changes in adolescence
2. To study cognitive development and creativity during adolescence
3. Case profile of an adolescent- including study of self, family relationships and peer relationships.
4. Use of interview/questionnaire method to study adult roles (at least one male and female)
  - Father/husband
  - Home maker
  - Employed woman
  - Grandfather/Grandmother
  - Single parent
  - College-going young adults
5. Familiarity with Psychological Tests of Intelligence and Personality- any four

## 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 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: A LIFE CYCLE APPROACH (CREDITS: THEORY-4, PRACTICAL-2)**

#### **THEORY**

**LECTURES :60**

#### **Unit I: Principles of meal planning**

**12**

- Food groups and Food exchange list
- Factors affecting meal planning and food related behavior
- Methods of assessment of nutrient requirements
- Dietary guidelines for Indians

#### **Unit II: Nutrition during adulthood**

**20**

Physiological changes, RDA, nutritional guidelines, nutritional concerns, energy balance and healthy food choices.

- Adults
- Pregnant women

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- Lactating mothers
- Elderly

**Unit III: 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

**Unit IV: Nutrition for special conditions**

8

- Nutrition for physical fitness and sport
- Feeding problems in children with special needs
- Considerations during natural and man-made disasters e.g. floods, war.

**PRACTICALS**

1. Introduction to meal planning

2

- Rich sources of nutrients
- Use of food exchange lists

2. Planning nutritious diets for:

10

- Young Adult
- Pregnant/ Lactating woman
- Preschooler
- School age child/Adolescent
- Elderly

3. Planning nutrient rich snacks/dishes for:

2

- Infants (Complementary foods)
- Children/Adults

**RECOMMENDED READINGS**

- Bamji MS, Krishnaswamy K, Brahmam GNV (2009). Textbook of Human Nutrition, 3<sup>rd</sup> edition. Oxford and IBH Publishing Co. Pvt. Ltd.
- Khanna K, Gupta S, Passi SJ, Seth R, Mahna R, Puri S (2013). Textbook of Nutrition and Dietetics. Phoenix Publishing House.
- Wardlaw GM, Hampl JS, DiSilvestro RA (2004). Perspectives in Nutrition, 6<sup>th</sup> edition. McGraw Hill.
- Chadha R and Mathur P (eds). Nutrition: A Lifecycle Approach. Orient Blackswan, Delhi. 2015
- Gopalan C, Rama Sastri BV, Balasubramanian SC (1989) Nutritive Value of Indian Foods. National Institute of Nutrition, ICMR, Hyderabad.

- Seth V and Singh K (2005). Diet Planning through the Life Cycle: Part 1 Normal Nutrition. A Practical Manual. Elite Publishing House Pvt. Ltd. New Delhi.

**Core Course 10: FASHION DESIGN CONCEPTS  
(CREDITS: THEORY-4, PRACTICAL-2)**

<b>THEORY</b>	<b>LECTURES (60)</b>
<b>Unit I: Fashion</b>	<b>16</b>
<ul style="list-style-type: none"> <li>• Terminology</li> <li>• Fashion cycle</li> <li>• Sources of fashion</li> <li>• Factors favouring and retarding fashion</li> <li>• Role of a Designer</li> <li>• Leading Fashion centres and designers</li> </ul>	
<b>Unit II: Importance of clothing</b>	<b>16</b>
<ul style="list-style-type: none"> <li>• Clothing functions and theories of origin</li> <li>• Clothing terminology</li> <li>• Individuality and conformity, conspicuous consumption and emulation</li> <li>• Selection of clothes for self</li> <li>• Selection and Evaluation of ready-made garments</li> </ul>	
<b>Unit III: Components of garment: classification and application</b>	<b>20</b>
<ul style="list-style-type: none"> <li>• Fabric, seams, stitches, thread, shaping methods, dart equivalents</li> <li>• Sleeves, cuffs, necklines, collars, plackets, yokes, pockets and trims</li> <li>• Style variation: bodice, skirts, trousers in various silhouettes</li> </ul>	
<b>Unit IV: Design</b>	<b>8</b>
<ul style="list-style-type: none"> <li>• Elements and principles of design</li> <li>• Structural and applied design</li> </ul>	
<b>PRACTICAL</b>	
1. Flat sketching of garment components	<b>3</b>
2. Identification of garment components	<b>3</b>
3. Interpretation of elements and principles of design concepts from print and visual mediums	<b>6</b>
4. Study of collections of famous designers	<b>2</b>

**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, 6<sup>th</sup> 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 11: THERAPEUTIC NUTRITION  
(CREDITS: THEORY-4, PRACTICAL-2)**

**THEORY**

**LECTURES: 60**

**Unit I Principles of nutrition care**

**8**

- Nutrition Care Process
- Therapeutic adaptations of the normal diet
- Progressive diets – clear fluid, full fluid, soft and regular

**Unit II Etiology, clinical features and nutritional management of Infections and Fevers**

**8**

- Typhoid
- Tuberculosis
- HIV

**Unit III Etiology, clinical features and nutritional management of the following**

**18**

- GI Tract Disorders:
  - Diarrhoea
  - Constipation
  - Lactose intolerance
  - Celiac disease.
- Liver: Infective Hepatitis

**Unit IV Etiology, clinical features and nutritional management of**

**10**

- Weight Imbalances-Overweight and obesity; Underweight
- Eating disorder- anorexia nervosa and bulimia

**Unit V Etiology, clinical features, basic diagnosis and nutritional management of the Following**

**12**

- Type 1 and Type 2 Diabetes Mellitus
- Metabolic Syndrome
- Hypertension and Coronary Heart Disease

**Unit VI Food allergy and food intolerance**

**4**

- Etiology, clinical features, diagnosis and nutritional management

**PRACTICAL**

Planning, preparation and service of diets for the following:



Therapeutic Diets – Normal, Soft, Clear and full fluid

- i. Fevers: acute and chronic
- ii. Obesity
- iii. Type 2 Diabetes
- iv. Hypertension and CHD

- v. Survey therapeutic foods in market

## 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.
- Mahan L K and Escott Stump S (2013). *Krause's Food & Nutrition Therapy*, 13<sup>th</sup> ed. Saunders-Elsevier.
- Stacy Nix (2009). *William's Basic Nutrition and Diet Therapy*, 13<sup>th</sup> Edition. Elsevier Mosby.
- ICMR (1999). *Nutritive Value of Indian Foods*. 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*, 4<sup>th</sup> edition. Elite Publishing House Pvt. Ltd.

### Core Course 12: PHYSIOLOGY AND PROMOTIVE HEALTH (CREDITS: THEORY-4, PRACTICAL-2)

#### THEORY

LECTURES: 60

#### Unit I : Physiology

Cardio- Respiratory Physiology	10
<ul style="list-style-type: none"> <li>• Blood -Composition and function, Anemia, Jaundice</li> <li>• Blood circulations (systemic, pulmonary, coronary and portal)</li> <li>• Cardiac cycle, Cardiac output, Blood pressure</li> <li>• Structure of lungs and its function</li> <li>• Lung volume and Capacities</li> </ul>	
Gastrointestinal Physiology	10
<ul style="list-style-type: none"> <li>• Structure of stomach, liver, gallbladder, pancreas and their functions</li> <li>• Composition, function and regulation of GI secretions</li> </ul>	
Neuro- Endocrine Physiology	10
<ul style="list-style-type: none"> <li>• Organization of nervous system</li> <li>• Actions and disorders of Pituitary, Thyroid and Parathyroid, Adrenal and Pancreatic hormones</li> </ul>	
Renal and Reproductive Physiology	10
<ul style="list-style-type: none"> <li>• Structure of kidney and its function</li> <li>• Physiology of Menstruation and Menopause</li> <li>• Physiology of Pregnancy and lactation</li> </ul>	

#### Unit II : Promotive Health

Concept of health , Disease and its Prevention	4
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- WHO definition of Health, Basic concept of Disease and Disease transmission,
- Definition of Public Health and Disease Prevention, Concept of Immunization and Immunization Schedule

#### Communicable Diseases

6

- Causative organism, Mode of transmission and Prevention and Control of Tuberculosis , Enteric Fever, Dengue fever, HIV/AIDS

#### Non Communicable Diseases

- General risk factors and Prevention of Diabetes, Hypertension and Cancer

#### Mental Health

6

- Psychosis, Neurosis, Drug abuse and Alcoholism

#### Maternal Health

4

- Antenatal Care, Family Planning and contraception

### PRACTICAL

1. Case study of Iron deficiency Anemia, investigations and diagnosis. Blood indices
2. Measurement of Blood pressure by using sphygmomanometer.
3. Demonstration of normal chest X ray
4. Demonstration of Reflex action
5. Demonstration of procedures of clinical examination to see for pallor , jaundice , edema and dehydration and their importance.
6. Latest imaging techniques like USG, CT, MRI the basic procedures
7. Basic First aid procedures, CPR, Burns
8. Visit to a DOTS center
9. Preparation of a project on Antenatal Care for women

### RECOMMENDED READINGS

- Ganong WF (2003). *Review of Medical Physiology*, 21<sup>st</sup> ed. McGraw Hill.
- J.E. Park and K. Park (2009). *Park's Textbook of Preventive and Social Medicine*, 20<sup>th</sup> edition. M/s Banarsi Das Bhanot, Jabalpur.
- Ross and Wilson(1973). *Foundation of Anatomy and Physiology*, Medical Division of Longman Group Ltd.
- Yash Pal Bedi (1980). *A Handbook of Social and Preventive Medicine*, Atma Ram and Sons.

**Core course 13: RESEARCH METHODOLOGY IN HOME SCIENCE  
(CREDITS: THEORY-4, PRACTICAL-2)**

**THEORY**

**LECTURES: 60**

**Unit I: Research- Meaning, purpose and approaches**

**20**

- Exploration, Description, Explanation
- Scientific method and research
- Research Designs –Experimental and Observational
- Quantitative and Qualitative approaches

***Conceptualization and Measurement***

- Variables, concepts and measurement
- Levels of measurement
- Units of analysis

**Unit II: Sampling & Tools**

**20**

- Role of sampling in research

- Types of sampling

### ***Research Tools and Techniques***

- Validity and reliability
- Interviewing and observational methods

### **Unit III: The Research Process**

20

- Defining the problem, research questions, objectives, hypotheses
- Review of related literature and originality in writing
- Planning the research
- Subjects context and ethics
- Methodology and tools
- Citation formats: in medical sciences, social sciences

### **PRACTICAL**

1. Exercise in sampling, random number table.
2. Exercise in designing tools and their analysis : interview, questionnaire.
3. Data collection process: conducting interviews, FGDs, case studies

### **RECOMMENDED READINGS**

- Kumar, R. (2005) *Research Methodology : A Step by Step Guide for Beginners*. Sage Publications, New Delhi.
- Kerlinger F. N. and Lee, H.B. (2000) *Foundations of Behavioural Research* 4<sup>th</sup> Ed. Harcourt College Publishers
- Kothari, C. R. (2008) *Research Methodology: Methods and Techniques* 2<sup>nd</sup> Ed. New Age International Pvt Ltd, New Delhi.
- Black, J.A. & Champion, D. J. ( 1976) *Methods and Issues in Social Research*. New York: John Wiley and Sons.

## **Core Course 14: SOCIO ECONOMIC ENVIRONMENT (CREDITS: THEORY-4, PRACTICAL-2)**

### **THEORY**

**LECTURES :60**

### **Part I: Sociological Concerns and Orientation**

#### **Unit I Sociological Orientation**

- Society, Culture and Institutions
- Family, Kinship and Relationships
- Social Groups and multiplicity
- Cultural diversity in contemporary life.

## **Unit II Emergence of New Ideological Orientations**

- Social mobility and social change
- Emergent Cultural Stereotypes
- Ethnographic approaches to the study of groups.
- Appreciating cultural plurality, Interconnection between the spheres
- Sociological Studies of Children, Youth and Women the aged: Empirical Problem & Frameworks.

## **Part II : Economic Theory and Environment**

### **Unit III: Introduction – Economic system, Consumption and production and distribution**

- 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
- 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 IV: Indian Economic Environment**

- 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.
- Recent 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.

## **PRACTICAL**

### **Part 1 Practical**

- Changing families & relating in society.

