

SAMBALPUR UNIVERSITY

COURSES OF STUDIES FOR THE THREE

YEAR DEGREE COURSE

OF

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

2016-19

B.A (HONS) HOME SCIENCE

Semester	Course Opted	Course Name	Credits
I	Ability Enhancement Compulsory Course - I	English Communications/ Environmental Science	2
	CC-I Theory	Human Development I: The Childhood Years	4
	CC -I Practical	Human Development I: The Childhood Years Practical	2
	CC -2 Theory	Food and Nutrition	4
	CC -2 Practical	Food and Nutrition Practical	2
	GE -I Theory	GE -I	4
	GE -I Practical	GE -I Practical	2
II	Ability Enhancement Compulsory Course -II	English Communications/ Environmental Science	2
	CC-3 Theory	Dynamics of Communication & Extension	4
	CC-3 Practical	Dynamics of Communication & Extension Practical	2
	CC-4 Theory	Resource Management	4
	CC-4 Practical	Resource Management Practical	2
	GE -2 Theory	GE -2 Theory	4
	GE - 2 Practical	GE - 2 Practical	2
III	CC-5 Theory	Introduction to Textiles	4
	CC-5 Practical	Introduction to Textiles Practical	2
	CC-6 Theory	Communication Systems and Mass Media	4
	CC-6 Practical	Communication Systems and Mass Media Practical	2
	CC-.7 Theory	Personal Finance & Consumer Studies	4
	CC-7 Practical	Personal Finance & Consumer Studies Practical	2
	SEC-J	SEC-I	2
	GE -3 Theory	GE -3 Theory	4
	GE - 3 Practical	GE - 3 Practical	2
IV	CC-8 Theory	Human Development II: Development in Adolescence and Adulthood	4
	CC-8 Practical	Human Development II: Development in Adolescence and Adulthood Practical	2
	CC-9 Theory	Nutrition: A Life Cycle Approach	4
	CC-9 Practical	Nutrition: A Life Cycle Approach Practical	2
	CC-IO Theory	Fashion Design Concepts	4
	CC-IO Practical	Fashion Design Concepts Practical	2
	SEC-2	SEC-2	2
	GE -4 Theory	GE -4 Theory	4
	GE - 4 Practical	GE - 4 Practical	2
V	CC-II Theory	Life Sciences	4
	CC-II Practical	Life Sciences Practical	2
	CC-12 Theory	Physical Sciences	4
	CC-12 Practical	Physical Sciences Practical	2
	DSE -I Theory	DSE -I Theory	4
	DSE -I Practical	DSE -I Practical	2
	DSE -2 Theory	DSE -2 Theory	4
	DSE -2 Practical	DSE -2 Practical	2

B.A (HONS) HOME SCIENCE

Contd ...

VI	CC-I 3 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
		Total	140

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

SAMBALPUR UNIVERSITY
B.A HOME SCIENCE (HONS)
CORE COURSES

Core Course 1: HUMAN DEVELOPMENT 1: THE CHILDHOOD YEARS
(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES:60

Objectives:

- **Build strong beginning.**
- **To know the different development period of childhood.**

Outcomes:

- **The percentage of children achieving age-appropriate growth and development milestone is increased.**
- **An understanding of the biological, psychological, social and cultural influences of lifespan human development is achieved.**

Unit 1: Introduction to Human Development

- Scientific Studies of Child Development
- Principles of Growth and Development

Unit II: Prenatal Development, Birth and the Neonate

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

Unit III: infancy and Preschool years

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

Unit IV: Middle childhood years

- Physical and motor development
- Social and emotional development
- Language development

PRACTICAL

1. Methods of child 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 materials such as Posters, toys etc.
 4. Study the role of familial and non-familial people in a child's life.
 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.

- Santrok , 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 Black Swan.

Core course 2: FOOD AND NUTRITION

(CREDITS: THEORY-4 PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- **Protect the health and safety of consumers by reducing food related risks.**
- **Support public health by promoting healthy food choices.**
- **Maintaining and enhancing the nutritional qualities of food.**

Outcomes:

- **It describes a healthy diet and food choice, and explains why such choices will help you to prevent health problems.**
- **Provide nutrition counseling and education to individuals, groups, and communities throughout the lifespan using a variety of communication strategies.**

Unit I: Basic concepts in food and nutrition

- 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

- 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 ,folate, vitamin B12 and vitamin C,
- Minerals- calcium, iron, zinc and iodine.
- Energy metabolism
- .

Unit III: Food groups

- Structure, composition, products, nutritional contribution ,selection and changes during cooking of the following food groups:
- Cereal
- Pulses
- Fruits and vegetables
- Milk & milk products
- Eggs
- Meat, poultry and fish
- Fat and oils
- Spices and herbs

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

Methods of cooking- Dry, moist, frying and microwave cooking, their advantages, disadvantages .
Supplementation, germination, fermentation, fortification and GM foods.

PRACTICAL

1. Weights and measures; preparing market order and table setting
2. Food planning- understanding the principles involved, nutritional quality and portion size.
 - Cereals: Boiled rice, pulao, chapatti, paratha, puri, pastas
 - Pulses: whole , dehusked
 - Vegetables: curries, dry preparations
 - Milk and milk products: Kheer, custard
 - Baked products: Biscuits, cookies, cakes, tarts and pies
 - Snacks: pakoras, cutlets, samosas , upma, poha, and sandwiches
 - Salads: salads and salad dressings.
 - Fermented products :Idli, dosa, appam, , kulcha, dhokla etc.

RECOMMENDED READINGS

- Bamji MS, Krishnaswamy K, Brahma GNV (2009). Textbook of Human Nutrition 3rd edition. Oxford and IBH publish Co Pvt Ltd.
- Srilakshmi (2007) .food science 4th edition. New age international Ltd.
- Wardlaw and Insel MG Insel PM (2004). Perspectives in Nutrition's sixth edition Mosby.
- Chadha R and Mathur P (eds) Nutrition: a lifecycle approach. Orient Blackswan, New Delhi. 2015
- Khanna K, Gupta S, Seth R, Mahhna 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

Objectives:

- To know the communication theories and communication models and analyses the communication process.
- To know the nature, classification and selection and use of appropriate methods in implementing extension programmes.
- Overview of audio-visual aids, their role and use in extension work.

Outcomes:

- Understand the concept of human communication and the communication process.
- Understand the role of visual aids in extension teaching/ learning situations.

Unit I: Communication: Concepts

- Historical background, concept and nature
- Functions of communication
- Types of communication- formal and informal communication; verbal and non-verbal communication
- Scope of communication- education, 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.

Unit II: Understanding Human Communication

- Cultural 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

- Concept, nature and relevance to communication process
- Empathy
- Persuasion
- Perception
- Listening

Unit IV: Communication for Extension

- 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.
2. Review of media on selected issues.
3. Design and use of graphic media.
4. Writing short stories, conveying messages to the community related to health and nutrition.
5. Preparation of Poster and Chart relating to health.

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

Objectives:

- Resource management is a means to achieve efficiency and effectiveness.
- Resource management has the responsibility to acquire, develop, and maintain employees.
- To utilize the available human resources effectively.

Outcomes:

- Resource management is a process of making the efficient and effective use of human resources so that the set goals are achieved.

Unit I: Introduction to Resource Management

- Concept, universality and scope of management
- Approach to management
- Ethics in management

Unit II: Resources

- Understanding meaning, classification and characteristics of resources, factors affecting utilization of resources.
- Maximizing use of resources and resource conservation.

Unit III: Availability and management of specific resources by an individual/ family

- Money
- Time
- Energy
- Space

Unit IV: Application of management process in:

- Decision making
- Planning
- Organizing
- Supervising
- Controlling
- Evaluation
- Event planning and execution

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 System and Contingency analysis of Managerial Functions. New York: Mc Graw – Hill Book Company
- Kretiner, 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)

THEORY

LECTURES: 60

Objectives:

- To know different types of textile fibers.
- To know the manufacturing process of different types of clothes.

Outcomes:

- The students will hereby develop an idea how to take care of different clothes.

Unit I: Introduction to textile fibers

- Primary and secondary properties of textile fibres
- Fiber classification

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

- Natural fiber: cotton, flax, silk and wool
- Man-made fibers: Rayon,

Unit III: Production and properties of Yarns

- Yarn construction:
- Mechanical spinning (cotton system, wool system, worsted system) chemical spinning (wet, dry, melt)
- Types of yarns: Staple and filament, simple yarn, complex yarns
- Yarn properties- yarn numbering
- Textured yarn: types and properties
- Difference between threads and yarns

Unit IV: Techniques of fabric construction, finishing, dyeing and printing

- Parts of a loom
- Operations and motions of loom
- Classification of weaves- construction, characteristic, usages
- Classification and uses of finishes
- Fundamentals of dyeing - stages of dyeing, application of dye, dyeing in the home, dyeing defects
- Printing - Hand printing, Machine printing, Printed fabric imperfections

PRACTICAL

1. Fiber identification tests- visuals, 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. Tie and Dye

RECOMMENDED READINGS:

1. Corbman P.B. (1985) Textiles- fiber to fabric (6th Edition) , Gregg Division /Mc Graw Hill Book Co, US.
2. Joseph, M.L. (1988) Essentials of Textiles (6th Edition), Holt , Rinehart and Winston Inc, Florida.
3. Vilensky G. (1983) Textile science, CBS Publishers and Distributors, Delhi.
4. Tortora, G. Phyllis, Understanding Textiles, Mc Millanm 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

Objectives:

- To achieve the target of the organization by motivating and influencing the target audience.
- To inform the public locally or globally.

Outcomes:

- Mass communication refers to the way in which an individual comes to adopt the behavior and values of a group.
- Mass media presents tradition of society and by observing that we learn how people get support to act and what values are important.

Unit I: Self and communication

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

Unit II: Interpersonal communication

- 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 and public communication

- Organizational communication: concept types, functions and networks
- Public communication- concept and techniques

Unit IV: Mass Communication and Mass media

- Mass communication – concept, significance, functions and elements
- 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.
2. Studying group dynamics in organizations- formal and informal
3. Audience analysis- relationship, listenership and viewership studies
4. Content analysis of mass media

RECOMMENDED READINGS

- Devito, J. (1998) Human communication. New York: Harper & Row.
- Barker , Larry Lee (1990) communication . eaglewood cliffs, New Jersey : Prentice Hall.
- Mc Quail, D. (2000) Mass communication theories London: sage Publications
- Baran Stanley J (2009). Introduction to mass communication, Mc Graw 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 , Mc Graw hill education.

Core course 7: PERSONAL FINANCE AND CONSUMER STUDIES

(CREDITS: THEORY-4 PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- To know the income and expenditure of family
- To know different consumer problems and how to protect it.

Outcomes:

- It provides accurate and objective information for teaching basic personal financial planning, saving and investing.

Unit I: Income and expenditure

- Household Income- Types, sources , supplementation of family income, use of family income, budgets, maintaining household accounts
- Factors influencing expenditure pattern
- Family savings and investments- need, principles, channels of investment, tax implications.
- Consumer credit- needs, sources, credit cards, housing finance.
- Guidelines for wise buying practices

Unit II: Consumer in India: Consumer problems and education

- 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 causes and solution.

Unit III: Consumer Protection

- Consumer education and empowerment.
- Consumer protection
- Consumer organizations – origin, functioning role and types.

Unit IV : Legislative Measures for Consumer Protection

- Basic legislative framework for consumer protection in India, consumer protection Act 1968 COPRA , alternative redressed mechanisms , mediation centers.

Unit V: Standardization and quality control measures :

- ISI, FPO, AGMARK, ISO, Eco mark, wool mark, silk mark, cotton mark, handloom mark, BEE star labeling and others.
 - Regulations on food Labeling and claims: FSSAI, Codex for consumers
 - **PRACTICAL**
1. Evaluation and designing of advertisements in the print media including products services and social aids.
 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. Food adulteration tests.

RECOMMENDED READINGS

- Khanna S.R Hanspal S. Kapoor S. &Awashti 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 Publisher

Core course 8: HUMAN DEVELOPMENT II: DEVELOPMENT IN ADOLESCENCE AND ADULTHOOD
(CREDITS: THEORY-4 PRACTICAL-2)

THEORY

LECTURES:60

Objectives:

- To know the different development tasks during adolescence.
- Identify the four stages of maturity in their life journey.

Out Comes:

- Apply development theory to the analysis of child observation, surveys and interviews.

Unit I : Introduction to Adolescence

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

Unit II: Cognitive Language and Moral development

- Perspective 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 relationship
- 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 relationship and peer relationships.
4. Use of the questionnaire method to study the responsibility of an adult roles as :
 - Father/ husband
 - Employed woman
 - Single parent
 - College going young adults

RECOMMENDED READINGS

- Berk. L.E. (2007) Development through the lifespan, Delhi: Person Education.
- Rice F.P(1998) Human Development: A lifespan approach, New Jersey: Prentice Hall

- Rutter, M. and Rutter , M (1992) A topical approach to life-span, development, New Delhi Tata Mc Graw-Hill.
- Sntrock J.W. (2007) A tropical approach to life- spam development, New Delhi: Tata McGraw-Hill
- Singh A. (Ed.) 2015 : Foundation of Human Development, A life span approach , New Delhi, Orient Black Swan.
- 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

Objectives:

- To examine the techniques available for the assessment of nutritional status.
- To identify and overcome obstacles in the provision of healthy diets for specific age groups.

Outcomes:

- Evaluate the role of nutrition in the promotion of health at every stage of lifecycle.

Unit 1 Principle of meal planning

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

Unit 2 Nutrition during adulthood

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

- Adult
- Pregnant woman
- Lactating mother
- Elderly

Unit 3 Nutrition during childhood

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

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

PRACTICAL

1 Introduction to meal planning

- Rich sources of nutrients
- Use of food exchange list

2 Planning and preparation of diets and dishes for -

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

3 Planning complementary foods for-

- Infants (Complementary Foods)

RECOMMENDED READINGS

- Bamji MS, Krishnaswamy, K. Brahman GNV(2009), Textbook of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co. Pvt. Ltd
- 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.
- Chadha R and Mathur P eds. Nutrition : A Lifecycle Approach. Orient Blackswan, New 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 (2006). 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)

THEORY

LECTURES:60

Objectives:

- To nurture graduates to be creative, critical, innovative and ethical leaders.
- To support and collaborate with fashion, textiles and design industry to achieve a sustainable progress.

Out Comes:

- The fashion design programme trains fashion designers that convert his/her unique design skills to resume textile fashion sector's competing state in globalizing world.

Unit 1 Fashion

- Fashion cycle
- Sources of fashion
- Factors favoring and retarding fashion
- Role of designer
- leading Fashion centres and designers

Unit II: Importance of clothing

- Clothing functions and theories of origin
- Clothing terminology

Unit III: Selection of Clothing

- Selection of clothes for self
- Selection and Evaluation of ready-made garments

Unit IV: Components of Garment: Classification and Application

- Fabric, Seams, Stitches, thread, Shaping methods, dart equivalents
- Sleeves, necklines, collars, plackets, yokes, pockets

Unit V: Design

- Elements and principles of design
- Structural and applied design

PRACTICAL

- Flat sketching of garments components
- Identification of garments components
- Interpretation of elements and principles of design concepts from print and visual mediums
- 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.
- Tata 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, PRATICAL-2)

THEORY

LECTURES:60

Objectives:

- To promote good health by teaching the public and other health professionals about and nutrition.
- To know the nutritional management of different diseases.

Out Comes:

- The department of nutrition and dietetics is to establish and encourage good nutritional practice and standards as an integral part of the health care.

Unit 1 Principles of nutrition care-

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

Unit II Etiology, clinical features and nutritional management of infection and fevers

- Typhoid
- Tuberculosis
- HIV

Unit III Etiology, Clinical features and nutritional management of the following

- Diarrhoea
- Constipation
- Lactose intolerance
- Liver: infective Hepatitis

Unit IV Etiology clinical features and nutritional management of

- Weight Imbalances- Over weight and obesity: Under weight
- Eating disorder- anorexia nervosa and bulimia

Unit V: Etiology clinical features, basic diagnosis and nutritional management of the following

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

PRATICAL

Planning of Diets for the following

Therapeutic Diet- Normal, soft, clear and full fluid

- (i) Fever : acute and chronic
- (ii) Obesity
- (iii) Type 2 Diabetes
- (iv) Hypertension and CHD

RECOMMEDED READINGS

- Khanna, K . Gupta S, Seth R, Passi, S.J. Mahan, R. PuriS(2013), Text book of Nutrition and Dietetics Phoenix Publishing House Pvt Ltd.
- Mahan L K and Escott Stump S (2013) Krause's food & Nutrition Therapy, 13thed Saunders – Elsevier
- Stacy Nix (2009) Willam's Basic Nutrition and Diet Therapy 13th Edition , Elsevier Mosby
- ICMR (1999) Nutritive value of Indian Foods. National Institute of Nutrition , Indian Council of Medical Research Hyderabad.
- Seth V and Sing K (2007) Diet Planning through the life Cycle Part 11 Diet Therapy A Practical Manual 4, edition , Elite Publishing House Pvt. Ltd.

Core Course 12: PHYSIOLOGY AND PROMOTIVE HEALTH

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES; 60

Objectives:

- To give students a general knowledge of the principles of health promotion.
- A practice management section dedicated to prevention, fitness, health promotion and wellness.

Outcomes:

- Health is a resource for everyday life, not the objective of living; it is a positive concept, emphasizing social and personal resources as well as physical capacities.

Unit 1; Physiology

- Blood- Composition and Function , Anemia, Jaundice
- Blood circulation (Systemic, pulmonary, Coronary and portal)
- Cardiac cycle, Blood pressure
- Structure of Lungs and its function

Unit II: Gastrointestinal Physiology

- Structure of stomach, liver, gallbladder, pancreas and their functions
- Composition , function and of GI secretions and digestion

Unit III:Endocrine Physiology

- Actions and disorders of pituitary, thyroid, adrenal and pancreatic hormones.

Unit IV: Renal and Reproductive physiology

- Structure of Kidney and its function
- Physiology of Menstruation and Menopause

Unit V: Promotive Health

- Concept of Health, Disease and its prevention
- Family planning and contraception

Therapeutic Diets Normal Soft clear and full fluid

- i. Fevers : Acute and Chronic
- ii. Obesity
- iii. Types 2 Diabetes
- iv. Hypertensions and CHD
- v. Drug abuse and alcoholism

PRATICAL

1. Case study of Iron deficiency Anemia, Investigation and diagnosis, Blood indices
2. Measurement of blood pressure by using sphygmomanometer.
3. Demonstration of procedures of clinical examination to see for pallor, jaundice, edema and dehydration and their importance.
4. Basic first aid procedures CPR, Burns.
5. Visit to a DOTS center.
6. Preparation of a project on Antenatal care for women.

RECOMMENDED READINGS

- Ganong WF (2003). Review of Medical Physiology, 21sted Mc Graw Hill.
- J.E. Park and K. Park (2009). Park's textbook of preventive and Social Medicine, 20th edition. M/s BanarsiDas , Jabalpur.
- Ross and Wilson (1973). Foundation of Anatomy and physiology, medical division of Longman Group Ltd.
- Yash Pal Bedi (1980). AHandbook of social and preventive medicine ,Atma Ram and Sons.

Core Couse 13 : RESEARCH METHODOLOGY IN HOME SCIENCE

(CREDITS: THEORY-4 PRATICAL-2)

THEORY

LECTURES: 60

Objectives:

- To achieve within a time frame and with available resources.
- It is a way to systematically solve a research problem.

Outcomes:

- It helps the students to deal with ethical and practical problems in research work.

Unit I: Research Meaning, purpose and approaches

- Exploration, Description, Explanation
- Scientific method and research
- Research Designs- Experimental and Observation
- Quantitative and Quantitative approaches

Conceptualization and Measurement

- Variable, Concepts and Measurement
- Levels of Measurement

Unit II: Sampling & Tools

- Role of sampling in research
- Types of sampling

Research Tools and Techniques

- Validity and reliability
- Interviewing and observational methods

Unit III : The Research Process

- 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

PRATICAL

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

RECOMMENDED READINGS

- Kumar R. (2006) Research Methodology: A step by step Guide for Beginners, Sage Publication , New Delhi.
- Kelinger F.N. and Lee, H.B (2000) Foundations of Behavioral Research 4th Ed. Harcourt College Publishers.
- Kothari C.R. (2008) Research Methodology: Methods and Techniques 2nd 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

Objectives:

- To know the relationship between society, economy and environment.
- Improve awareness to help social groups and individuals related to environment and development.

Outcomes:

- The natural and environmental resource input function is central to understanding the relationship between economic growth and environment.

Unit -I: Sociological Concerns and Orientation

Sociological Orientation

- Society, Culture and institutions
- Family, Kinship and Relationships
- Cultural diversity in contemporary life.

Unit-II: Economics Theory and Environment

- Definition, Scope and Economics,
- Wants- Classification and Characteristics
- Utility- Law of Diminishing, Marginal Utility, Law of Equi- Marginal Utility Demand- Law Demand, Elasticity of Demand.

UNIT-III :Engel's Law of Consumption,

- Types and function of money, inflation ,
- Types and functions of banks
- Public Revenue.

UNIT IV: INDIAN ECONOMIC ENVIRONMENT

- Constraints on growth: Issue of population, income, distribution, poverty, unemployment, and migration food security.
- Recent development programmes of the Government of India : Jana Dhana Yojana, SarvaSikha Yojana.
- Planning: Objective and Achievement

PRACTICAL

PART 1 PRACTICAL

- Changing families & Relations in Society
- Individuals facing and Conflicts and consensus in Society
- Changing status and roles in varied spaces in family, work the elderly and its implication on the individuals and society across cultures.
- Experience of exclusion on the individual, caste, minority , disability, violence, immigration.
- Religion and Culture
- Caste studies, narrative, films , fieldtrips to different regions, communities like tribal, rural, urban.

PART II: PRACTICAL

- Field Visit(to do the comparative economics studies)
- Case Studies related to current economics issues (Development and Environmental)

- Data interpretation and analysis (to see the trends of growth and development of certain sectors of vice versa)

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

- 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. RatanPrakashan

DISCIPLINE SPECIFIC ELECTIVE (DSE)
DSE I: CHILDHOOD IN INDIA
(CREDITS; THEORY-4, PRACTICAL -2)

THEORY

LECTURES: 60

Objectives:

- To understand the childhood life in India.
- To understand the psycho- social dimension of childhood.
- To know the contemporary issues of childhood in India.

Outcomes:

- It enables the student to understand the effect of poverty caste, culture, religion and languages in childhood year.

Unit I : Introduction of Childhood in India

- Children in India: An overview
- Child hood in mythology, stories and films

Unit II: Multiple contexts of Childhood in India

- Childhood in families
- Growing up without the family
- Childhood in Schools
- Children in extra- familial setting
- Belonging to a minority community

Unit III: Psycho- Social dimensions of Childhood

- Growing up in tribal family
- Childhood in selected family occupations: artists , farmers , weavers
- Growing up in rural setting
- Childhood in urban India
- Being a girl in India

Unit IV: Contemporary Issues of Childhood in India

- Language, religion and culture
- Poverty and disadvantage
- Caste and Childhood
- Children on streets

PRACTICAL

1. Personal Social experiences of childhood families
2. Beliefs and practices related to children in different communities
3. Stories, Folk songs, toys and games from diverse ethnic groups
4. Depiction of Child hood in Media

RECOMMENDED READING

- Behera D.K. (Ed.) (2007) Childhood in South Asia : New Dehlih , Pearson- longman
- Krinshna L. (1998), Child rearing : An India perspective In A.K. Srivastav (Ed.), Child Development: An Indian perspective Pp 25-55 New Delhi : National Council for Educational Research and Traning.
- Sharma D. (2003) Infancy and Childhood in India, In D. Sharma(Ed.) Childhood, Family and Sociocultural changes in India(13-47) New, Delhi , Oxford.

DSE-2, TEXTILE, PROCESSING
(CREDITS: THEORY -2 PRACTICAL-2)

LECTURES: 60

THEORY

Objectives

- To know different type of dyes, techniques of dyeing, theory of dyeing.
- To know different method of pretending and adaption of improved technology of printing.
- To know different finishing process applied in dyeing and printed fabrics.

Outcomes:

- It enable the student to know different type of dyeing and printing used in fabric to make it more attractive and also expand their knowledge about the different process of dyeing and printing.

Unit 1 : Dyeing

- Terminology and theory of dyeing
- Classification of dyes
- Principles of colour fastness.

Unit 2: Printing

- Methods of Printing
 - Block Printing
 - Flat Plate and roller printing
 - Stencil, Screen (Flat and rotary), Printing
 - Transfer Printing
- Styles of Printing: Direct, discharge, Digital printing etc.
- Fixation of prints: Ageing, Steaming, Baking wet development
- Washing of printed goods
- Auxiliaries
 - Wetting agents, dispersing agents and solvents
 - Hygroscopic agents
 - Carriers
 - Binders and Thickeners

Unit 3: Finishing

- Classification of finishes
- Preparatory Finishes
- Finishes affecting appearance and texture
- Finishes for enhancing special characteristics

PRACTICAL

1. Dyeing

- On cotton using direct, reactive, azo and vat
 - On wool silk using acid, basic and reactive
 - On acrylic using basic dyes.
2. Printing with blocks and screens
- Direct Printing- pigment colours
 - Discharge printing- Direct dyes
 - Resist Printing- Azo dyes
3. Color fastness of dyed fabrics

- Wash fastness
- Crock/Rub-fastness
- Perspiration fastness

RECOMMENDED READING

- Miles L.W.C. (1994) Textile Printing 2nd edition, England, Society of Dyers and Colorists
- Sekhri S. (2013) Textbook of Fabric Science : Fundamental to Finishing , PHI Learning Delhi
- Shenai, V.A. (1987) Chemistry of Dyes and Principles of Dying . Vol. II Bombay, India, Sevak Publication.

DSE 3: INDIAN TEXTILES HERITAGE

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES: 60

Objectives

- To study the different textile craft of India
- To know the care and storage techniques of different traditional textile.
- To study the socio- economic significance of Traditional textile and its popularity in modern India.

Outcomes:

- Enable student to understand the culture and heritage of India associated with textile.
- To encourage and motivate the use of handloom and handicraft product.

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

Unit 2: Conservation of Traditional Textile

- Evolution and Socio- economic significance of Khadi, Handloom and Handicraft sector
- Sustenance of Traditional textile crafts

PRACTICAL

1. Traditional Embroideries
2. Tie and dye
3. Batik
4. Block Printing
5. Portfolio and product development
6. Visit to craft centres.

Recommended Readings.

1. Agrawal O.P. 1977 Care and Presentation of Museum Projects –II NRL
2. Chattopadhyaya K.D. 1995, Handicrafts of India, Wiley Eastern Limited Delhi
3. Das Shukla, Fabric Art- Heritage of India, AbhinavPublicatons, N. Delhi

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

THEORY

LECTURES: 60

Objectives:

- To understand the importance of public nutrition and its role
- To know different nutritional problem faced by people
- To study the different method of assessment of nutritional statues of people.

Out Comes:

- It helps the students to know the nutrition during life cycle.

Unit 1 Concept and scope of public nutrition

- Definition and multi-disciplinary nature of public nutrition
- Concept and Scope
- Role of Public nutritionist

Unit II: Nutritional problems, their implications and related nutrition programmes

- Etiology, prevalence, clinical features and preventive strategies of Under nutrition
- Protein energy malnutrition , nutritional anemia's, vitamin A deficiency, iodine deficiency disorders.
- Over nutrition- obesity, coronary heart disease, diabetes.
- Fluorosis
- National Nutrition Policy and Programme- integrated Child Development Services (ICDS), Scheme Mid day Meal Programme(MDMP), National programmes for prevention of Anemia, Vitamin A deficiency, Iodine Deficiency Disorders.

Unit III: Assessment of nutritional Status

- Objectives and importance
 - Methods of Assessment
- A. Direct- Clinical signs, nutritional anthropology, biophysical tests.
- B. Indirect- Diet Surveys, Statistics.

IV: NUTRITION EDUCATION

- Objectives , principles and scope of nutrition and health education and promotion
- Behavior change communication.

PRACTICAL

1. Planning of low cost nutritious recipes for infants, preschoolers, pregnant/ nursing mothers for nutrition education
2. Assessment of nutritional status:
 - Anthropometry- weight and height measurements
 - Plotting and interpretation of growth charts for children below 5years
 - Identification of clinical signs of common nutritional disorders.
 - Dietary assessment- FFQ and 24hour diet recall
3. Planning and conduction a food demonstration
4. Visit to an ongoing nutrition and health promotion programme

RECOMMENDED READINGS

- Wadhwa A and Sharma S (2003) Nutrition in community – A Text book, Elite Publishing House Pvt. Ltd New Delhi
- Park K (2011) Park's Text book of Preventive and Social Medicine, 21st Edition, M/S BanarasidasBhanot Publisher, Jabalpur, India
- Bamji MS Krishnaswamy K and Brahman GNC (Eds) (2009), Text Book of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co Pvt Ltd New Delhi,
- ICMR (1989) Nutritive Value of Indian Foods, National Institute of Nutrition, Indian Council of Medical Research , Hyderabad.
- ICMR (2011) Dietary Guideline for Indian- A Manual National Institute of Nutrition, Indian Council of Medical Research Hyderabad.
- Jeliffe DB, Jeliffe ERP, Zarfara A and NeumananCG(1989) Community Nutritional Assessment with special reference to less technically developed countries, Oxford University Press Oxford.
- World Health Organization (2006) WHO Child growth Standards. Methods and development , length/height for age, weight of age, weight-for length , weight for height and body mass index for age ([http:// who.int/child growth/standards/en/](http://who.int/childgrowth/standards/en/))

SKILL ENHANCEMENT COURSES (SEC)

SEC-1 : HOME BASED CATERING (CREDITS: THEORY 2)

THEORY

LECTURES: 60

Objectives:

- To know different type food service unit.
- To understand the different-step towards planning and execution of food service unit.

Out comes:

- It mobilizes and ensures optimum utilization of resources available at hand.

Unit I: Introduction of food service

- factors contributing to the growth of food service industry
- kinds of food service establishments

Unit II: Food production

- 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 III: Resources

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

Unit IV: Planning of A food service Unit

- Preliminary planning - Survey of types of units, identifying clientele, menu, operations and delivery

Recommended readings:

- West B Besie& Wood Levelle (1988) Food service in institutions 6th Edition revised By HargarFV ,Shuggart&Palgne Palacio June, Macmillian publishing company.
- SethiMohini (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-2 : MATERNAL AND CHILD NUTRITION

(CREDIT : THEORY 2)

THEORY

LECTURERS:30

Objectives:

- To improve utilization of community based health and nutrition for pregnant women and children.
- To improve the health status of mother and child.

Outcomes:

- Maternal and child nutrition addresses fundamental aspects of nutrition as well as initiatives for women and their children.

Unit-I

- Nutritional needs during pregnancy, common disorder of pregnancy (Anaemia, HIV infection, pregnancy induced hypertension), relationship between maternal diet and birth outcome.
- Maternal health and nutritional status, maternal mortality and issue relating to maternal health.

Unit -II

- Nutritional needs of nursing mothers and infants determinants of birth weight and consequences of low birth weight, breastfeeding support and counseling.

Unit- III

- Infant and young child feeding and care- current feeding practices and nutritional concerns, guidelines for infant and young child feeding, Breast feeding, weaning and complementary feeding.
- Assessment and management of moderate and severe malnutrition among children, Micronutrient malnutrition among preschool children.
- Child health and morbidity, neonatal, infant and child mortality, IMR and U5MR, link between mortality and malnutrition.

Unit IV

- Overview of maternal and child nutrition policies and programmes.

RECOMMENDED READINGS

- Wadhwa A and Sharma S (2003) . Nutrition in the community- A Textbook. Elite publishing house Pvt Ltd New Delhi.
- Park K (2011). Park's textbook of preventive and social medicine , 21st edition M/s BanarasidasBhanot publishers, Jabalpur, India.
- Bamji MS, Krishnaswamy K and Brahman GNV (Eds) (2009). Textbook of human nutrition 3rd edition. Oxford and IBH publishing Co. Pvt Ltd, New Delhi.
- National guidelines on infant and young child feeding (2006). Ministry of women and child development, Government of India

GENERIC ELECTIVES (GE)

GE 1: HUMAN NUTRITION (CREDITS: THEORY 4, PRACTICAL-2)

THEORY

LECTURES:60

Objectives

- To understand the relationship between food, nutrition and health.
- To understand the importance of food and nutrition in different life stages.

Out comes:

- Students will be qualified to work on public polices, epidemiological studies, nutrition and dietetics programmes.

Unit-1: Basic Concepts in Nutrition

- Basics terms used in nutrition
- Understanding relationship between food, nutrition and health
- Functions of Food- Physiological , psychological and social
- Basic food groups and concept and balanced diet.

Unit II: Nutrients

Functions, Recommended Dietary, Allowances, dietary sources, effect of deficiency and or excess consumption on health of the following nutrients.

- Carbohydrates and dietary fiber
- Lipids
- Proteins
- Fat soluble vitamins- A,D,E, and K
- Water soluble vitamins- Thiamin, Riboflavin, Niacin, Pyridoxine, Folate, Vitamin B 12 and Vitamin C
- Minerals- Calcium , Iron, Zinc and iodine

Unit III: Nutrition during lifecycle

Physiological considerations and nutritional concerns for following life stages.

- Preschool children
- Adolescent Children
- Adult Man/ Woman
- Pregnant Woman

- Nursing Woman and infant

PRACTICAL

1. Identifying Rich Sources of Nutrients

Energy, Protein, Iron, Calcium, Fiber, Vitamin A, Ascorbic acid.

2. Introduction to Meal planning

- Basic food groups
- planning nutritious diets/ Snacks for
 - Adult man/ Woman of different activity levels.
 - Pre School Children
 - Adolescent Children
 - Pregnant Woman
 - Nursing Woman

RECOMMENDED READINGS

- Wardlaw and Insle, MG, Insel PM (2004) , Perspectives in Nutrition, Six Edition, MrGraw Hill
- Srilakshmi B (2012) Nutrition Science 4th Revised Edition, New Age International Publishers.
- Khann K. Gupta , S. Seth R. Passi, SJ, Mahna , R. Puri S(2013) Textbook of Nutrition and Dietetics, Phonenix Publishing House Pvt Ltd.
- ICMR (2010) Recommended Dietary Allowances for Indias, Published by National Institute of Nutrition, Hyderabad
- Chadha R and Mathur P. cds (2015) Nutrition : A lifecycle Approach, Orient Blackwan, New Delhi.
- Seet V and Singh K (2006) Diet Planning through the life Cycle : Part 1 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.

GE: 2 NUTRITION, A LIEFSPAN APPROACH

CREDITS: THEORY 4 PRACTICALS, 2

THEORY

LECTURES: 60

Objectives

- To know different food groups and this contribution to the diet and importance of balance diet for different age groups
- To know the factors that affect the meal planning and food related behavior.

Outcomes:

- Educate individuals and the public on food choices that will optimize health and prevent disease.

UNIT 1: Principles of meal Planning

- Balanced diet
- Food Groups
- Food Exchange list

- Factors affecting meals planning and food related behavior
- Dietary guidelines for Indians and food pyramid

Unit II: Nutrition for adulthood and old age

- Adult : Nutrient requirements for adult man and woman, RDA, nutritional guidelines, nutrition concerns diet and lifestyle related diseases and their prevention.
- Elderly: Physiological changes in elderly, RDA , nutritional guidelines, nutritional and health concerns in old age and their management, factors contributing to longevity.

Unit III : Nutrition during childhood

- Growth and development /referencestandards- RDA, nutritional guidelines , nutritional concerns and healthy food choices.
- Infants
- Preschool children
- School children
- Adolescents

PRACTICAL

Unit I: Introduction to meal planning

- Use of food exchange list

Unit II: Planning and preparation of diets and dishes for

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

Unit III: Planning complementary foods for infants

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.
- 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, (2015) Nutrition: A lifecycle approach. Orient Blackswan . New Delhi.
- Seth V and Singh K (2006). Diet planning through the life cycle : Part 1 Normal nutrition. A practical manual. Elite publishing house Pvt Ltd. New Delhi.
- Gopalan C, Rama Sastri BV, Balasubramanian SC (1989) Nutritive value of Indian food. National institute of Nutrition ICMR, Hyderabad.

GE3: ENTREPRENEURSHIP FOR SMALL CATERING UNITS

(CREDITS: THEORY 4 , PRACTICAL -2)

THEORY

LECTURES: 60

Objectives

- To create more employment opportunities with less investment.
- To attain less reliance
- To solve unemployment problems

Outcomes:

- It helps to remove economic backwardness in rural and less developed region of the country

Unit I. Food service units and Menu Planning

- Origin of food service units
- Kinds of food service units
- Importance of menu
- Factors affecting menu planning.
- Types of menu.

Unit II Organization, management and production process

- Principles of management
- Functions of management / manager
- Food purchase
- Food receiving
- Food Storage
- Food service
- Food hygiene and sanitation

Unit III : Space and equipment

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

Unit IV: Financial Management and Planning of a small food service Unit

- Importance of Financial Management
- Budgets and Budgeting process
- Preliminary planning - Survey of types of units, identifying clientele , menu, operations and delivery
- Development of a business plan

PRACTICAL

1. Market survey for food items both raw processed
2. Survey of food service units
3. Standardization of a recipe
4. Preparing Quick foods for scaling up for quantity production
5. Planning menus for the following:
 - **Packed** meals for office employees
 - Nutritious Tiffin's school employees
 - School/ College canteens
6. Demonstration of specialized cuisine
7. Develop a check list for good hygiene practices

RECOMMENDED READING

- West B Bessie & Wood Levelle “(1988) Food Service in institutions 6th Edition Revised by Hargar FV, Shuggart SG ,&Palgne Palacio June, Muacmilliam Publishing Company New Work.
- SethiMohini (2005) Institution Food Management New Age International Publishers
- Knight JB &Kotschevar LH (2000) Quantity Food Production Planning & Management 3rd Edition John Wiley & Sons
- DesslerGyar(1987) Personnel Management , Modern Concept & Technique Prentice Hall New Jersey
- Tripathi PC (2000) Personnel Management 15th Sultan Chand, New Delhi
- Kazarian EA (1977) Food Service Facilities Planning 3rd Edition Von Nostand Reinhold NewWork .
- Kotas Richard &Jayawardardene C (1994) Profitable Food and Beverage Management Hodder& Stoughton Publications.
- Longree K. Langree K, Longrie K (1996) Quantity Food Sanitation, John Wilely& Sons Roday S (2003) Food Hygiene &Santitaion , Tata MC Graw Hill Publication Ltd.
- Taneja S and Gupta SL (2001) Entrepreneurship Development ,Galgotia Publishing.

GE 4 : CURRENT CONCERNS IN PUBLIC HEALTH NUTRITION

(CREDIT: THEORY 5, TUTORILA 1)

THEORY

LECTURES: 60

Objectives:

- To know the different nutritional problems (under nutrition, over nutrition), their sign and symptoms and prevention strategies.
- To improve or maintain the optimal health of population andthe targeted group.

Outcomes:

- Public health nutrition strives to improve the entire population’s health; it aims to reach high risk and vulnerable groups in the community.

Unit 1: Nutritional Problems Affecting the community

Etiology, Prevalence, Clinical features and preventive strategies of

- Under nutrition – Protein energy, malnutrition, Server Acute Malnutrition and moderate Acute Malnutrition, Nutritional Anemia, Vitamin Deficiency , iodine Deficiency Disorders.
- Over nutrition – obesity, coronary heart disease, diabetes
- Fluorosis

Unit II: Strategies for improving nutrition and health status of the community

- Appropriate interventions involving different sectors such as food, health and education

Unit III: National nutrition policy and Programme

- National Nutrition Policy
- Integrated child development services (ICDS) Scheme, Mid day meal programme (MDMP) , National programmes for prevention of anemia, Vitamin A deficiency, Iodine Deficiency Disorders.

Unit IV : Food and Nutrition Security

- Concept , components , determinants and approaches
- Overview of public sector programmes for improving food and nutrition security

TUTORIAL

1. Planning and evaluation of low cost nutritious recipes for preschoolers, school age children, adolescents pregnant and nursing mother.
2. Planning and evaluation of low calorie nutritious recipes for weight management.
3. Planning and conducting a food demonstration.
4. Visit to an ongoing nutrition programme

RECOMMENDED READINGS

- Wadhwa A and Sharma S (2003) Nutrition in community – A Text book, Elite Publishing House Pvt. Ltd New Delhi
- Park K (2011) Park's Text book of Preventive and Social Medicine, 21st Edition, M/S BanarasidasBhanot Publisher, Jabalpur, India
- Bamji MS Krishnaswamy K and Brahman GNC (Eds) (2009), Text Book of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co Pvt Ltd New Delhi,
- Gibney MJ (2005). Public Health Nutrition
- Vir S. (2011) Public Health Nutrition in developing Countries Vol 1 and 2
- ICMR (1989) Nutritive Value of Indian Foods, National Institute of Nutrition, Indian Council of Medical Research , Hyderabad.
- ICMR (2011) Dietary Guideline for Indian- A Manual National Institute of Nutrition, Indian Council of Medical Research Hyderabad.
- Park K (2011) Park's Text book of Preventive and Social Medicine, 21st Edition, M/S BanarasidasBhanot Publisher, Jabalpur, India
- Bamji MS Krishnaswamy K and Brahman GNC (Eds) (2009), Text Book of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co Pvt Ltd New Delhi,

HOME SCIENCE (PASS) CBCS SYLLABUS

FIRST SEMISTER

CORE-1 FOOD AND NUTRITION

(CREDITS: THEORY-4 PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- Protect the health and safety of consumers by reducing food related risks.
- Support public health by promoting health food choices.
- Maintaining and enhancing the nutritional qualities of food.

Out Comes:

- It describes a healthy diet and food choices, and explain why such choices will help to prevent health problems.

Unit I: Basic concepts in food and nutrition

- 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

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 B12 and vitamin C,
- Minerals- calcium, iron, zinc and iodine.

Unit III: Food groups

- Structure, composition, products, nutritional contribution selection and changes during cooking of the following food groups:
- Cereal
- Pulses
- Fruits and vegetables
- Milk & milk products
- Eggs
- Meat, poultry and fish
- Fat and oils
- Spices and herbs

Unit IV: Nutrient loses in cooking and enhancing the nutritional quality of foods-

- Dry., moist, frying and microwave cooking
- Advantages, disadvantages and the effect of various methods of cooking on foods
- Supplementation, germination, fermentation, fortification and GM foods.

PRACTICAL

3. Weights and measures; preparing market order and table setting
4. Food planning understanding the principle involved, nutritional quality and portion size.
 - Cereals: Boiled rice, pulao, chapatti, paratha, puri, pastas
 - Pulses: whole , dehusked
 - Vegetables: curries, dry preparations
 - Milk and milk products: Kheer, custard
 - 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, barura, kulcha, dhokla

RECOMMENDED READINGS

- Bamji MS, Krishnaswamy K, Brahma GNV (2009). Textbook of Human Nutrition 3rd edition. Oxford and IBH publish Co Pvt Ltd.
- Srilakshmi (2007) .food science 4th edition. New age international Ltd.
- Wardlaw and Insel MG Insel PM (2004). Perspectives in Nutrition's sixth edition Mosby.
- Chadha R and Mathur P (eds) Nutrition: a lifecycle approach. Orient Blackswan, New Delhi. 2015
- Khanna K, Gupta S, Seth R, Mahanna 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.

SECOND SEMISTER

Core-2

RESOURCE MANAGEMENT
(CREDITS: THEORY -4 PRACTICAL-2)

THEORY

LECTURES: 60

Objectives:

- Resource management is a means to achieve efficiency and effectiveness.
- Resource management has the responsibility to acquire develop, utilize and maintain employees.
- To utilize the available human resources effectively.

Out Comes:

- Resource management is a process of making the efficient and effective use of human resources so that the set goals are achieved.

Unit I: Introduction to Resource Management

- Concept, universality and scope of management
- Approach to management
- Ethics in management

Unit II: Resources

- Understanding meaning, classification and characteristics of resources, factors affecting utilization of resources.
- Maximizing use of resources and resource conservation.

Unit III: Availability and management of specific resources by an individual/ family

- Money
- Time
- Energy
- Space

Unit IV : Application of management process in:

- Decision making
- Planning
- Supervising
- Controlling
- Organizing
- Evaluation
- Event planning & execution

PRACTICAL

6. Resource conservation and optimization / green technologies (natural resources): portfolio
7. Identification and development of self as a resource
 - SWOT analysis-who am I and micro lab
 - Building decision making abilities through management games
8. Preparation of time plans for self and family
9. Time and motion study

10. 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 System and Contingency analysisi of Managerial Functions. New York: Mc Graw – Hill Book Company
- Kretiner, 2009 , Management Theory and Applications , Cengage Larning : India
- Rao V.S and Narayana P.S., Principles and practices of management, 2007, konark publishers Pvt Ltd.

THIRD SEMISTER

CORE-03

CORE: 03 INTRODUCTION TO TEXTILES

CREDITS: THEORY-4 , PRACTICAL-2

THEORY

LECTURES:60

Objectives:

- To know different types of textile fibres.
- To know the manufacturing process of different types of clothes.

Out Comes:

- The students will hereby develop an idea how to take care of different clothes.

Unit I : Introduction to textile fibres

- Morphology of textile fibers
- Primary and secondary properties
- Fibre classification

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

- Natural fibre: cotton, flax, silk and wool
- Man-made fibers: Rayon,

Unit III: Production and properties of Yarns

- Yarn construction:
- Mechanical spinning (cotton system, wool system, worsted system) chemical spinning (wet, dry, melt)
- Types of yarns: Staple and filament, simple yarn, complex yarns
- Yarn properties- yarn numbering
- Textured yarn: types and properties
- Difference between threads and yarns
- Blends: Types of blends and purpose of blending

Unit IV: Techniques of fabric construction, finishing, dyeing and printing

- Parts of a loom
- Operations and motions of loom
- Classification of weaves- construction, characteristic, usages
- Classification and uses of finishes
- Fundamentals of dyeing - stages of dyeing, application of dye, dyeing in the home, dyeing defects
- Printing - Hand printing, Machine printing, Printed fabric imperfections

PRACTICAL

7. Fibre identification tests- visuals, burning, microscopic and chemical
8. Yarn identification- single, ply, cord, textured, elastic, monofilament, multifilament and spun yarn.
9. Thread count and balance
10. Dimensional stability
11. Weaves- identification and their design interpretation on graph

12. Tie and Dye.

RECOMMENDED READINGS:

6. Corbman P.B. (1985) Textiles- fiber to fabric (6th Edition) , Gregg Division /Mc Graw Hill Book Co, US.
7. Joseph, M.L. (1988) Essentials of Textiles (6th Edition), Holt , Rinehart and Winston Inc, Florida.
8. Vilensky G. (1983) Textile science, CBS Publishers and Distributors, Delhi.
9. Tortora, G. Phyllis, Understanding Textiles, Mc Millanm Co. USA.
10. Sekhri S. (2013) Textbook of Fabric Science: Fundamentals to finishing, PHI Learning, Delhi.

SEC-01 Either in third or fourth Semester

SKILL ENHANCEMENT COURSES (SEC)
SEC-1 : HOME BASED CATERING
(CREDITS: THEORY 2)

THEORY

LECTURES:60

Unit I: Introduction to food service

- factors contributing to the growth of food service industry
- kinds of food service establishments

Unit II: Food production

- 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 III: Resources

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

Unit IV: Planning of A food service Unit

- Preliminary planning - Survey of types of units, identifying clientele, menu, operations and delivery

Recommended readings:

- West B Besie& Wood Levelle (1988) Food service in institutions 6th Edition revised By HargarFV ,Shuggart&Palgne Palacio June, Macmillian publishing company.
- SethiMohini (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.

FOURTH SEMESTER

CORE 04: NUTRITION : A LIFE CYCLE APPROACH (CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES 60

Objectives:

- To examine the techniques available for the assessment of nutritional status.
- To identify and overcome obstacles in the provision of healthy diets for specific age groups.

Out comes:

- Evaluate the role of nutrition in the promotion of health at every stage of lifecycle.

Unit 1 Principle of meal planning

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

Unit 2 Nutrition during adulthood

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

- Adult
- Pregnant woman
- Lactating mother
- Elderly

Unit 3 Nutrition during childhood

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

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

PRACTICAL

1 Introduction to meal planning 3

- Rich sources of nutrients
- Use of food exchange list

2 Planning and preparation of diets and dishes for 10

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

3 Planning complementary foods for Infants

- Infants (Complementary Foods)
- Children / Adults

RECOMMENDED READINGS

- Bamji MS, Krishnaswamy, K. Brahman GNV(2009), Textbook of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co. Pvt. Ltd
- 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.
- Chadha R and Mathur P eds. Nutrition : A Lifecycle Approach. Orient Blackswan, New 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 (2006). *Diet Planning through the Life Cycle: Part 1 Normal Nutrition. A Practical Manual*. Elite Publishing House Pvt. Ltd. New Delhi.

FIFTH SEMESTER

DISCIPLINE SPECIFIC ELECTIVE (DSE) DSE1 : CHILDHOOD IN INDIA (CREDITS; THEORY-4, PRACTICAL -2)

THEORY

LECTURES:60

Objectives:

- To understand the childhood life in India.
- To understand the psycho- social dimension of childhood.
- To know the contemporary issues of childhood in India.

Outcomes:

- It enables the student to understand the effect of poverty caste, culture, religion and languages in childhood year.

Unit 1: Introduction of Childhood in India

- Children in India: An overview
- Social Construction of Childhood and family
- Childhood in mythology, stories and films

Unit II : Multiple contexts of Childhood in India

- Growing up without the family
- Childhood in Schools
- Children in extra- familial setting
- Belonging to a minority community

Unit III: Psycho- Social dimensions of Childhood

- Growing up in tribal family
- Childhood in selected family occupations: artists , farmers , weavers
- Growing up in rural setting
- Childhood in urban India
- Being a girl in India

Unit IV: Contemporary Issues of Childhood in India

- Language, religion and culture
- Poverty and disadvantage
- Caste and Childhood
- Children on streets

PRACTICAL

5. Personal Social experiences of childhood families
6. Beliefs and practices related to children in different communities
7. Stories, Folk songs, toys and games from diverse ethnic groups
8. Depiction of Child hood in Media

RECOMMENDED READING

Behera D.K. (Ed.) (2007) Childhood in South Asia : New Dehlih , Pearson- longman

Krinshna L. (1998), Child rearing : An India perspective In A.K. Srivastav (Ed.), Child Development: An Indian perspective Pp 25-55 New Delhi : National Council for Educational Research and Traning.

Sharma D. (2003) Infancy and Childhood in India, In D. Sharma(Ed.) Childhood, Family and Sociocultural changes in India(13-47) New, Delhi , Oxford.

Either in 5th or 6th SEMESTER

GENERIC ELECTIVES (GE)

GE 1: HUMAN NUTRITION (CREDITS: THEORY 4, PRACTICAL-2)

THEORY

LECTURES:60

Objectives

- To understand the relationship between food, nutrition and health.
- To understand the importance of food and nutrition in different life stages.

Outcomes:

- Students will be qualified to work on public polices, epidemiological studies, nutrition and dietetics programmes.

Unit-1 : Basic Concepts in Nutrition

- Basics terms used in nutrition
- Understanding relationship between food, nutrition and health
- Functions of Food- Physiological , psychological and social
- Basic food groups and concept and balanced diet.

Unit II: Nutrients

- Functions, Recommended Dietary, Allowances, dietary sources, effect of deficiency and or excess consumption on health of the following nutrients.
- Carbohydrates and dietary fiber
- Lipids
- Proteins
- Fat soluble vitamins- A,D,E, and K
- Water soluble vitamins- Thiamin, Riboflavin, Niacin, Pyridoxine, Folate, Vitamin B 12 and Vitamin C
- Minerals- Calcium , Iron, Zinc and Iodine

Unit III: Nutrition during lifecycle

Physiological considerations and nutritional concerns for following life stages.

- Adult Man/ Woman
- Preschool children
- Adolescent Children
- Pregnant Woman

Nursing Woman and infant

PRACTICAL

3. Identifying Rich Sources of Nutrients

Energy, Protein, Iron, Calcium, Fiber, Vitamin A, Ascorbic acid.

4. Introduction to Meal planning

- Basic food groups
- Use of food exchange list for planning nutritious diets/ Snacks for
 - adult Man/ Woman of different activity levels.
 - Pre School Children
 - Adolescent Children
 - Pregnant Woman
 - Nursing Woman

RECOMMENDED READINGS

- Wardlaw and Insle, MG, Insel PM (2004) , Perspectives in Nutrition, Six Edition, MrGraw Hill
- Srilakshmi B (2012) Nutrition Science 4th Revised Edition, New Age International Publishers.
- Khann K. Gupta , S. Seth R. Passi, SJ, Mahna , R. Puri S(2013) Textbook of Nutrition and Dietetics, Phonenix Publishing House Pvt Ltd.
- ICMR (2010) Recommended Dietary Allowances for Indias, Published by National Institute of Nutrition, Hyderabad
- Chadha R and Mathur P. cds (2015) Nutrition : A lifecycle Approach, Orient Blackwan, New Delhi.

SIXTH SEMESTER

DSE-02 : PUBLIC NUTRITION AND DIETETICS

(CREDITS: THEORY-4, PRACTICAL-2)

THEORY

LECTURES:60

Objectives:

- To understand the importance of public nutrition and its role
- To know different nutritional problem faced by people
- To study the different method of assessment of nutritional statues of people.

Outcomes:

- It helps the students to know the nutrition during life cycle.

Unit 1 Concept and scope of public nutrition

- Definition and multi-disciplinary nature of public nutrition
- Concept and Scope
- Role of Public nutritionist

Unit II: Nutritional problems, their implications and related nutrition programmes

- Etiology, prevalence, clinical features and preventive strategies of Under nutrition

- Protein energy malnutrition, nutritional anaemias, vitamin A deficiency, iodine deficiency disorders.
- Over nutrition- obesity, coronary heart disease, diabetes.
- Fluorosis
- National Nutrition Policy and Programme- integrated Child Development Services (ICDS), Scheme Mid day Meal Programme(MDMP), National programmes for prevention of Anemia, Vitamin A deficiency, Iodine Deficiency Disorders.

Unit III: Assessment of nutritional Status

Objectives and importance

Methods of Assessment

- C. Direct- Clinical signs, nutritional anthropology, biophysical tests.
- D. B- indirect- Diet Surveys, Statistics.

IV: NUTRITION EDUCATION

- Objectives , principles and scope of nutrition and health education and promotion

PRACTICAL

5. Planning of low cost nutritious recipes for infants, preschoolers, pregnant/ nursing mothers for nutrition education
6. Assessment of nutritional status:
 - Anthropometry- weight and height measurements
 - Plotting and interpretation of growth charts for children below 5years
 - Identification of clinical signs of common nutritional disorders.
 - Dietary assessment- FFQ and 24hour diet recall
7. Planning and conduction a food demonstration
8. Visit to an ongoing nutrition and health promotion programme

RECOMMENDED READINGS

Wadhwa A and Sharma S (2003) Nutrition in community – A Text book, Elite Publishing House Pvt. Ltd New Delhi

Park K (2011) Park's Text book of Preventive and Social Medicine, 21st Edition, M/S BanarasidasBhanot Publisher, Jabalpur, India

Bamji MS Krishnaswamy K and Brahman GNC (Eds) (2009), Text Book of Human Nutrition 3rd Edition, Oxford and IBH Publishing Co Pvt Ltd New Delhi,

ICMR (1989) Nutritive Value of Indian Foods, National Institute of Nutrition, Indian Council of Medical Research , Hyderabad.

ICMR (2011) Dietary Guideline for Indian- A Manual National Institute of Nutrition, Indian Council of Medical Research Hyderabad.

Jeliffe DB, Jeliffe ERP, Zarfar A and NeumananCG(1989) Community Nutritional Assessment with special reference to less technically developed countries, Oxford University Press Oxford.

World Health Organization (2006) WHO Child growth Standards. Methods and development , length/height for age, weight of age, weight-for length , weight for height and body mass index for age ([http:// who.int/child growth/standards/en/](http://who.int/childgrowth/standards/en/))