

Faculty of Home Science Professor Jayashankar Telangana State Agricultural University Rajendranagar, Hyderabad – 500030 B.Sc. (Hons) Community Science I, II, III & IV year syllabus with lecture outlines

Department Wise List of Courses, Course Numbers and Credit Hours – Approved

A) Core Courses

Department of Apparel and Textiles		
Course No.	Course Title	Credit hours
APTX 111	Textile Science and Fabric Care	3(2+1)
APTX 121	Fundamentals of Clothing Construction	3(1+2)
APTX 211	Techniques of Fabric Construction	3(1+2)
APTX 221	Textile Finishes	2(1+1)
APTX 311	Garment and Accessory Designing	3(0+3)
APTX 312	Retailing and Merchandising-Textiles and Apparel	2(2+0)
APTX 321	Traditional Textiles and Costumes of India	3(2+1)
	Total	19(9+10)
Department of	Extension Education and Communication Management	
EECM 121	Extension and Rural Development	3(2+1)
EECM 211	Women in Agriculture	3(2+1)
EECM 221	Extension Training Management	3(1+2)
EECM 311	Project Management	2(1+1)
EECM 321	Information and Communication Technology	3(1+2)
EECM 322	Diffusion and Adoption of Homestead Technologies	3(2+1)
	Total	17(9+8)
Department of	Foods and Nutrition	
FDNT 111	Principles of Human Nutrition	3(3+0)
FDNT 121	Food Science and Processing	3(2+1)

FDNT 211	Community Nutrition and Education	3(2+1)
FDNT 212	Food and Nutrition Policy and Agriculture	2(2+0)
FDNT 221	Normal and Therapeutic Nutrition	4(3+1)
FDNT 222	Food Standards and Quality control	3(2+1)
FDNT 311	Food Hygiene and Sanitation	2(1+1)
FDNT 312	Food Analysis	3(1+2)
FDNT 321	Clinical Nutrition and Dietetics	3(2+1)
	Total	26(18+8)
Department of	Human Development and Family Studies	
HDFS 111	Fundamentals of Human Development	2(2+0)
HDFS 121	Life-Span Development	3(2+1)
HDFS 211	Marriage and Family Dynamics	3(2+1)
HDFS 221	Developmental Challenges in Children	3(2+1)
HDFS 311	Family Counseling and Welfare	3(2+1)
HDFS 321	Education Psychology and Early Childhood Education	3(2+1)
	Total	17(12+5)
Department of	Resource Management and Consumer Sciences	
RMCS 111	Fundamentals of Art and Design	3(2+1)
RMCS121	System Dynamics and Management of Resources	2(1+1)
RMCS211	Financial Management and Consumer Education	2(2+0)
RMCS221	Housing and Space Management	3(2+1)
RMCS222	Ergonomics and Appropriate Technologies	2(1+1)
RMCS311	Residential and Commercial Space Design	3(2+1)
RMCS321	Entrepreneurship Development and Business	3(2+1)
	Management	
	Total	18(12+6)

B) Community Science Basic Courses (CSBC)

Course No.	Course Title	Credit Hours
CSBC 111	General English-I	2(1+1)
CSBC 112	Introduction to Rural Sociology	2(2+0)
CSBC 113	Environmental Studies and Disaster Management	3(2+1)
CSBC 114	National Service Scheme*	2(0+2)
CSBC 115	Physical Education & Yoga*	1(0+1)
CSBC 121	Technical Writing –English-II	2(1+1)

CSBC 122	Principles of Biochemistry	3(2+1)
CSBC 123	Agricultural Informatics	3(1+2)
CSBC 211	Elementary Statistics	3(2+1)
CSBC 212	Fundamentals of Food Microbiology	3(2+1)
CSBC 221	Communication Skills and Personality Development	3(2+1)
CSBC 311	Economics and Marketing	3(2+1)
CSBC 321	Elementary Human Physiology	3(2+1)
	Total	33(19+14)
	*Non gradial courses	

C) Semester Wise Distribution of Courses

Course No.	Course Title	Credit Hours
I SEMESTER		
CSBC 111	General English – I	2 (1+1)
FDNT 111	Principles of Human Nutrition	3(3+0)
APTX 111	Textile Science and Fabric Care	3(2+1)
RMCS 111	Fundamentals of Art and Design	3(2+1)
HDFS 111	Fundamentals of Human Development	2(2+0)
CSBC 112	Introduction to Rural Sociology	2(2+0)
CSBC 113	Environmental Studies and Disaster Management	3(2+1)
CSBC 114	National Services Scheme	2(0+2)
CSBC 115	Physical education/ yoga	1 (0+1)
	Total	21(14+7)
II SEMESTER	·	
CSBC 121	Technical Writing (English)	2 (1+1)
FDNT 121	Food Science and Processing	3(2+1)
APTX 121	Fundamentals of Clothing Construction	3(1+2)
RMCS121	System Dynamics and Management of Resources	2(1+1)
HDFS 121	Life-Span Development	3(2+1)
EECM 121	Extension and Rural Development	3(2+1)
CSBC 122	Principles of Biochemistry	3(2+1)
CSBC 123	Agricultural Informatics	3(1+2)
	Total	22 (12+10)
III SEMESTER		
FDNT 211	Community Nutrition and Education	3(2+1)
FDNT 212	Food and Nutrition Policy and Agriculture	2 (2+0)
APTX 211	Techniques of Fabric Construction	3(1+2)
RMCS 211	Financial Management and Consumer Education	2(2+0)
HDFS 211	Marriage and Family Dynamics	3(2+1)
EECM 211	Women in Agriculture	3(2+1)
CSBC 211	Elementary Statistics	3(2+1)
CSBC 212	Fundamentals of Food Microbiology	3(2+1)
	Total	22(15+7)
IV SEMESTER		

FDNT 221	Normal and Therapeutic Nutrition	4(3+1)
FDNT 222	Food Standards and Quality Control	3(2+1)
APTX 221	Textiles Finishes	2(1+1)
RMCS 221	Housing and Space Management	3(2+1)
RMCS 222	Ergonomics and Appropriate Technologies	2(1+1)
HDFS 221	Developmental Challenges in Children	3(2+1)
EECM 221	Extension Training Management	3(1+2)
CSBC 221	Communication Skills and Personality Development	3(2+1)
	Total	23(14+9)
V SEMESTER		
FDNT 311	Food Hygiene and Sanitation	2(1+1)
FDNT 312	Food Analysis	3(1+2)
APTX 311	Garment and Accessory Designing	3(0+3)
APTX 312	Retailing and Merchandizing- Textiles and Apparel	2(2+0)
RMCS 311	Residential and Commercial Space Design	3(2+1)
HDFS 311	Family Counseling and Welfare	3(2+1)
EECM 311	Project Management	2(1+1)
CSBC 311	Economics and Marketing	3(2+1)
	Total	21(11+10)
VI SEMESTER		
FDNT 321	Clinical Nutrition and Dietetics	3(2+1)
CSBC 321	Elementary Human Physiology	3(2+1)
APTX 321	Traditional Textiles and Costumes of India	3(2+1)
RMCS 321	Entrepreneurship Development and Business Management	3(2+1)
HDFS 321	Educational Psychology and Early Childhood Education	3(2+1)
EECM 321	Information and Communication Technology	3(1+2)
EECM 322	Diffusion and Adoption of Homestead Technologies	3(2+1)
	Total	21(13+8)
STUDENT REAL	DY PROGRAMME	40(0+40)
VII SEMESTER		
READY-411	Experiential Learning Programme	20(0+20)
(Rural	(Any 2modules out of 4 with 10 credits each)	
Enterpreneurship		
Awareness		
Development		
Yojana)		
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VIII SEMESTER		
READY-421	RAWE	10(0+10)
READY-422	Skill Development Training/Internship	10(0+10)
	Total	20(0+20)

DEPARTMENTWISE AND YEARWISE DETAILED LECTURE OUTLINES

FOR I, II, III AND IV YEAR FOR

B SC (HONS) COMMUNITY SCIENCE

Basic Supporting Courses

1 st Year 1 st Semester		
CSBC 111	General English – I	2 (1+1)
CSBC 112	Introduction to Rural Sociology	2 (2+0)
CSBC 113	Environmental Studies and Disaster Management	3 (2+1)
CSBC 114	National Services Scheme	2 (0+2)
CSBC 115	Physical education/ yoga	1 (0+1)
1 st Year 2 nd S	emester	
CSBC 121	Technical Writing (English)	2 (1+1)
CSBC 122	Principles of Biochemistry	3(2+1)
CSBC 123	Agricultural Informatics	3(1+2)
2 nd Year 1 st S	emester	
CSBC 211	Elementary Statistics	3(2+1)
CSBC 212	Fundamentals of Food Microbiology	3(2+1)
2 nd year 2 nd S	emester	
CSBC 221	Communication Skills and Personality Development	3(2+1)
3 rd year 1 st Se	emester	
CSBC 311	Economics and Marketing	3(2+1)
3 rd year 2 nd S	emester	
CSBC 321	Elementary Human Physiology	3(2+1)

Detailed Lecture Outlines

1st Year 1st Semester

CSBC 111	General English – I	2 (1+1)
Course No. – CSBC 111		
Title – General English		

Credit hours 2 (1+1)

General Objective: - To enable the students to admire literary master pieces& inculcate creativity & artistic balance in them.

Specific Objective: - By the end of the course the students will be able to

Theory:

- Admire literary master pieces
- Inculcate creativity & aesthetic sense
- Learn language through Literature

Practical:

- Pronounce & articulate words with correct stress mark
- Learn how to write words in phonetic form
- Speak understandable English.

Theory Lecture Outlines

- Word Formation Steps involved in the formation of a word
- Prepositions Types of prepositions, Role of prepositions in the formation of a sentence
- Idiomatic Expressions Enrichment of vocabulary through the use of idioms, how they add beauty to a sentence
- Conditional sentences Use of conditional words like if, whether, until & unless.
- Modal Verb Role of modal verbs in a sentence, Examples of modal verbs.
- Synthesis & Transformation of sentences teaching vocabulary & grammar through the use of different types of sentences.
- Essay Writing Essentials of good essay, Different types of essays
- Five topics to be discussed under Essay Writing.

The following lessons from the text book "Selections from modern English prose" Edited by Haldhar Panda.

- Education for new India C. Raja Gopala Chary
- The sporting spirit George Orwell
- On saying please AG Gardiner
- The secret of work Swami Vivekananda
- The generation gap Benjamin Spock
- Learning Vocabulary, grammar & pronunciation through the above mentioned lessons.
- Appreciation of literature Teaching students the ability to grasp & appreciate the literature
- Revision & Feedback.

Suggest readings:

- 1. Allen, W. Standard. Living English structure, Orient Longmans, London
- 2. Sharma, SD. A textbook of spoken and written English

Practical Lecture Outlines

- Introduction to spoken English
- Orthography, orthoepy
- Listening comprehension exercises
- English conversation practice
- Spoken English slashes, Diakretics
- Vowels of spoken and written English

- Monophthongs Types with examples
- Diphthongs Types with examples
- Stress Meaning and definition
- Syllable Definition- words having one, two, three, four and five syllables
- Rules of stress
- Words having stress on first syllable
- Words having stress on second syllable
- Change of stress mark according to word function
- Review or Feedback
- Final practical examination

FDNT 111Principles of Human Nutrition3(3+0)

- 1. Course No. : FDNT 111
- 2. Title : Principles of Human Nutrition
- 3. Credit hours : 3 (3+0)

4. General Objectives:

- To develop an insight into the historical development of nutrition science and its relation to health.
- Create awareness about the concepts of balanced diets and recommended dietary intakes.
- Impart knowledge of nutrients, their functions, sources, requirements, digestion, absorption, deficiency diseases and toxicity.
- Develop basic understanding of nutritional assessment techniques.

5. Specific Objectives:

Theory:

By the end of the course students will be able to:

- Know list macro nutrients and micro nutrients and their historical development.
- Learn about different classification of carbohydrates, protein and lipids, their functions, deficiency symptoms, requirements and food sources and the process of their digestion and absorption.
- Learn about importance of energy, factors affecting BMR and requirements and sources.
- Learn about fat soluble and water soluble vitamins, minerals and water, their functions, deficiency symptoms, requirements and food sources.
- Know the techniques of evaluation of nutritional status of population.

Theory Lecture Outlines:

1. Introduction to nutrition science and its relation to health, growth and human welfare.

- 2. Historical development of Nutrition science.
- 3. Carbohydrates- introduction, types and classification.
- 4. Carbohydrates- functions, sources and requirements.

- 5. Health conditions influenced by carbohydrates and significance of dietary fibre.
- 6. Lipids- introduction, types and functions.
- 7. Lipids- sources, requirement and health conditions associated with lipids.
- 8. Proteins- introduction, types and classification.
- 9. Protein- functions, sources and requirements.
- 10. Protein quality evaluation and improvement.
- 11. Protein energy malnutrition- causes, signs and symptoms of kwashiorkor and marasmus.
- 12. Energy units, sources and requirements.
- 13. Fuel value of food, energy requirement of the body- physical activity and thermogenic effect of food.
- 14. BMR -methods of measurement and factors affecting Basal Metabolic rate.
- 15. Digestion and absorption of carbohydrates.
- 16. Digestion and absorption of proteins and fats.
- 17. Vitamins- Introduction, classification as fat soluble and water soluble vitamins.
- 18. Vitamin A- functions, sources, requirement, deficiencies and toxicity.
- 19. Vitamin D- functions, sources, requirement, deficiencies and toxicity.
- 20. Vitamin E- functions, sources, requirement, deficiencies and toxicity.
- 21. Vitamin K- functions, sources, requirement, deficiencies and toxicity.
- 22. Water soluble vitamins- Vitamin C or ascorbic acid- functions, sources, requirement and deficiencies.
- 23. Thiamine (B1) functions, sources, requirement and deficiencies.
- 24. Riboflavin (B2) functions, sources, requirement and deficiencies.
- 25. Niacin (B3) functions, sources, requirement and deficiencies.
- 26. Pyridoxine (B6) functions, sources, requirement and deficiencies.
- 27. Vitamin B12 functions, sources, requirement and deficiencies.
- 28. Vitamin Folic acid- functions, sources, requirement & deficiencies.
- 29. Minerals introduction and classification.
- 30. Calcium- functions, sources, requirement and deficiencies.
- 31. Phosphorus- functions, sources, requirement and deficiencies.
- 32. Iodine-functions, sources, requirement and deficiencies.
- 33. Fluorine-functions, sources, requirement and deficiencies.
- 34. Iron-functions, sources, requirement and deficiencies.
- 35. Sodium-functions, sources, requirement and deficiencies.
- 36. Potassium-functions, sources, requirement and deficiencies.
- 37. Chloride and copper functions, sources, requirement and deficiencies.
- 38. Zinc-functions, sources, requirement and deficiencies.
- 39. Bio availability and factors affecting calcium and iron absorption.
- 40. Electrolyte balance- need for maintenance.
- 41. Water- functions, source, distribution in body and water balance.
- 42. Concept of recommended dietary allowances.
- 43. Recommended allowances for specific nutrients and energy.

- 44. Concept of balanced diet and importance.
- 45. Basic food groups characteristics and their contribution to the diet.
- 46. Nutraceuticals, Dietary supplements, Functional food, Phytochemicals.
- 47. Assessment of nutritional status- anthropometric and biochemical methods.
- 48. Assessment of nutritional status -clinical and dietary surveys.

APTX 111 Textile Science and Fabric Care

1.Course No: APTX 111

2. Title: Textile Science & Fabric care

3. Credit Hours: 3(2+1)

4. **General Objective:** To impart knowledge about textile basics like fibre, yarn, fabric in general, understand the primary and secondary properties of economically important textile fibers, yarns and fabrics, know the fabric labels, stain removal, care and laundry aspects.

5. Specific Objective:

a) Theory

By the end of the course, student will be able to

- To grasp basic concepts related to textile fibers, yarns, fabrics
- To enlarge vocabulary of textile fibers, yarns and fabrics
- To keep up with the basics and advances in textile fibers
- To understand the care and storage aspects of different fabrics available in market

b) Practical

By the end of the course, student will be able to

Distinguish common fibre types

- Understand processes used in forming yarns and fabrics from fibres
- Identify some common yarn and fabric construction techniques
- Understand how different fibres degrade, how textile construction affects degradation, how to take care of different fabrics.
- Undertake fibre, yarn, fabric identification strategies

A) Theory Lecture Outlines

- 1. Textile: definition, forms of textile, importance of textile industry in national economy
- 2. Classification of textile fibres
- 3. Properties of textile fibres- primary properties
- 4. Properties of textile fibres-secondary properties
- 5. Molecular structure of textile fibres: Monomers, polymers and their types, polymerization and its types, degree of polymerization and orientation
- 6. Cotton:Fibre production, fibre varieties and their grading ,fibre morphology, physical, chemical and biological properties and end-uses
- 7. Bastfibres: Flax, Fibre production, fibre morphology, physical, chemical and biological properties and end-uses

3(2+1)

- 8. Jute: Fibre production, fibre morphology, physical, chemical and biological properties and enduses
- 9. Other bastfibres : hemp and ramie Fibre production, fibre morphology and physical, chemical and biological properties and end-uses
- 10. Wool: Fibre production, classification of wool and their labeling, fibre morphology, physical, chemical and biological properties and end-uses
- 11. Silk:Fibre production and classification, fibre morphology, physical, chemical and biological properties and end-uses
- 12. Chemical spinning: Wet, melt and dry spinning and common properties of man-made fibres
- 13. Rayons: Viscose, rayons; fibre manufacturing, microscopic structure, physical, chemical and biological properties and end-uses
- 14. Cupramonium and High Wet Modulus fibre manufacturing, microscopic structure, physical, chemical and biological properties and end-uses
- 15. Synthetic fibres: Nylon, fibre manufacturing, fibre microscopic structure, physical, chemical and biological properties and end-uses
- 16. Synthetic fibres: polyesterfibre manufacturing, fibre microscopic structure, physical, chemical and biological properties and end-uses
- 17. Synthetic fibres: acrylic; fibre manufacturing, fibre microscopic structure, physical, chemical and biological properties and end-uses
- 18. Mechanical spinning: Ring spinning method
- 19. Classification of yarn on the basis of structure- simple and novelty yarns, twist direction, twist amount, fibre length and end-uses
- 20. Yarns: size of yarn, count systems
- 21. Methods of fabric construction: Weaving, knitting, braiding, tufting, net, lace making, crocheting, macramé,
- 22. Methods of fabric construction: stitch through fabrics, quilted fabrics, laminated fabrics, bonded fabrics, felt, nonwoven and films
- 23. Stain removal: Classification of stains and methods of removing different stains
- 24. Laundry: Definition, principles, equipments, laundry methods
- 25. Laundry: dry cleaning
- 26. Laundry agents: Water,
- 27. soap,
- 28. laundry auxiliary, stiffening agents, bleaches and blues
- 29. Care of textiles: Labeling and labeling Act Labels and tags used in textiles
- 30. Storage of clothes: Requirements of short term and long term storage,
- 31. Folding and packaging of clothes
- 32. Revision

B) Practical Lecture Outlines

- 1. Testing of textile fibres- Visual test
- 2. Testing of textile fibres Microscopic view
- 3. Testing of textile fibres Burning test
- 4. Testing of textile fibres Solubility test
- 5. Testing of unknown fiber
- 6. Study and identification of different types of yarns in the market
- 7. Study and identification of fabric samples available in the market
- 8. Study of thread count of samples using pick glass, line gratings, raveling method
- 9. Removal of different stains from fabric surface
- 10. Washing and finishing of garments made of Cotton
- 11. Washing and finishing of garments made of Wool
- 12. Washing and finishing of garments made of Silk
- 13. Washing and finishing of garments made of Blends/ synthetic
- 14. Visit to textile industry
- 15. Report writing
- 16. Removal of different stains from fabric surface

References:

- 1. Corbman B. P (1983) Textiles-fiber to fabric, Mc Graw-Hill Int., USA
- Dantyagi, S. 1959. Fundamentals of textiles and their Care. New Delhi. Orient Longman Limited.
- **3.** Deulkar, D. and Tarabai.1967. Household textiles and laundry Work. 3rd ed. Delhi.Atma Ram and Sons Ltd
- 4. Kadolph S J (2013) Textiles: Pearson New International Edition, Pearson Education Ltd, Asia
- Noemia, D Souza (1998) Fabric Care New Age Publications
- Vatsala, R. 2003. Textbook of Textiles and Clothing. New Delhi. Indian Council of Agriculture Research
- 7. Wynne A (1997) Textiles The Motivate Series, Macmillan

RMCS 111		Fundamentals of Art and Design	3(2+1)
1.	Course Number	: RMCS 111	
2.	Title	: Fundamentals of Art and Design	
3.	Credit Hours	: 3 (2+1)	
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4. General objective : To impart knowledge and skills in fundamentals of art and design principles in interior design

5. Specific objectives:

a. Theory

By the end of the course the students will be able to

- To understand design fundamentals
- To develop an awareness of the factors that determine the appropriateness of successful design
- To apply design fundamentals to develop aesthetic and functional living space

b. Practical

By the end of the course the students will be able to

- To apply the design fundamentals effectively in an interior design setting
- To discover the effects of applying the design fundamentals in various situations
- To achieve aesthetic harmony through design

Theory

Introduction and objectives of interior decoration. Types of Design and their requirements. Elements of art and their importance in interior decoration. Principles of design and their application to enrich the interiors - Colour – Importance, need, theory, schemes – Lighting – importance, types of lighting and its application - Furniture: Types, use and care, and materials – Walls , Floor, floor coverings,ceilings: Importance, types, care, maintenance, and selection : Stair cases: Importance, types, care, maintenance, and selection - Windows – importance, its functional and decorative treatments – Accessories: Classification, selection and arrangement - Flower arrangement – materials used, principles involved, types, practical utility and care - Table setting – methods and materials used for table setting and table etiquettes.

Practical

Learning elements of art and principles of design. Development of motif and design through art principles. Colour – colour schemes, values and intensity scale, colour wheel. Lighting, fixtures and then utility. Furniture – care and arrangement of furniture. Accessories – preparation and placements of accessories. Flower arrangement. Learning different types of table setting and napkin folding. Window treatment. Market survey – different types of wall and floor coverings.

A. Theory lecture outlines

- 1. Introduction and objectives of interior decoration
- 2. Design Types, features and requirements
- 3. Elements of art and their importance in interior decoration
- 4. Elements of art and their importance in interior decoration
- 5. Principles of design and their application to enrich the interiors
- 6. Principles of design and their application to enrich the interiors
- 7. Colour Sources of colour, Colour theories and properties of colour
- 8. Colour Colour schemes and Colour plans for interiors
- 9. Colour Emotional effects of colour
- 10. Lighting Importance and sources
- 11. Lighting Types of lighting and its application.
- 12. Furniture Types of furniture

- 13. Furniture Materials and finishes of furniture
- 14. Furniture Selection, Care and maintenance of furniture
- 15. Furniture Furniture arrangement
- 16. Walls Classification, characteristics and Materials Used
- 17. Walls Types of wall treatments
- 18. Walls Exterior and interior wall finishes.
- 19. Ceilings Types, materials and functions
- 20. Floors Importance and types of floors
- 21. Floors Types of floor covering
- 22. Floors Selection and Care, maintenance of floor covering and floors
- 23. Windows, Doors, Ventilators Importance and types
- 24. Windows Functional and decorative treatments
- 25. Staircases Types and Materials
- 26. Accessories Definition, Importance and Classification
- 27. Accessories Application of principles of design and decoration in the selection/development of accessories, and their placement.
- 28. Flower arrangement Definition, Importance, Tools and Mechanics
- 29. Flower arrangement Shapes and Types of flower arrangement
- 30. Flower arrangement Principles of flower arrangement, utility and care
- 31. Table setting Types and styles
- 32. Table setting Methods and Materials used for table setting and table etiquettes.

B. Practical lecture outlines

- 1. Learning the application of elements of art in design
- 2. Learning the application of principles of design in design
- 3. Development of motif and design through art principles
- 4. Developing a Colour wheel
- 5. Developing value and intensity scales
- 6. Developing Colour schemes related
- 7. Developing Colour schemes contrasting
- 8. Developing a scrap book on Lighting fixtures
- 9. Identifying different types of Furniture through pictures
- 10. Identifying different arrangement of furniture for different rooms
- 11. Accessories Preparation and placements of accessories
- 12. Flower arrangement
- 13. Flower arrangement
- 14. Learning different types of table setting and napkin folding
- 15. Window treatment

16. Market survey - different types of wall and floor coverings

References:

- 1. Dorothi, et al., (1980). Introduction to Interior Design. New York: Mc Millan.
- 2. Faulkner & Faulkner. (1975). Inside Today's Home. New York: Holt, Rinehart & Winston.
- 3. Ruth, M. (1975). The Home and its Furnishings, U.S.A.: Mc. Graw Hill.
- 4. Seetharaman P. and Sethi M. (2002) Interior Design and Decoration. CBS Publishers & Distributors. New Delhi.

Suggested Readings

- 1. Gewther, M. (1970). The Home, its Furnishings & Equipment U.S.A. Mc. Graw Hill.
- 2. Mike, L. (1986). The Complete Interior Decoration. United Kingdom: Mc Donald.
- Parveen Pannu, Premavathy Seetharaman. 2013. Interior Design and Decoration. CBS Publishers & Distributors Pvt. Ltd.,
- Seetharaman P. 2015. An Introduction to Family Resource Management. CBS Publishers & Distributors Pvt. Ltd., New Delhi.
- 5. Judith Blacklock. Flower Arranging: The Complete Guide for Beginners. Amazon.com.

HDFS	111	Fundamentals of Human Development	2(2+0)
1.	Course No	: HDFS111	
2.	Title	: Fundamentals of Human Development	
3.	Credit Hours	: 2(2+0)	
4.	General Object	tive : To create a basic foundation by imparting knowledge a	about
		the fundamentals of human development	

5. Specific Objectives

By the end of the course the students will be able to

- Understand different concepts related to human development
- Study the role of heredity and environment during the life span
- Understand the trends and issues in human development
- Study the various theories related to human development
- Learn various concepts related to human research

A) Theory lecture outlines

- 1. Meaning and Definitions of human development, Introduction to evolution of the study of human development, Goals of the scientific study of human development, Periods of lifespan development, Areas of human development.
- 2. History of studying human development- Before 19th century and after 19th century.
- 3. Scope and importance of human development, characteristics of the life span perspective- Human development is lifelong, multidimensional, multidirectional, plastic, multidisciplinary, contextual,

human development involves growth, maintenance and regulation of loss, human development is a co-construction of biology, culture and the individual factors.

- Relationship of human development discipline of with other disciplines of study- Physical sciences- physiology, pediatrics and genetics; Social sciences-psychology, sociology, anthropology and education.
- Latest issues in human development- Nature and nurture, stability and change, continuity and discontinuity; some contemporary concerns- health and well being, parenting and education, social policy, socio cultural contexts and diversity- culture, cross-cultural studies, ethnicity, socio economic status, gender.
- Growth and development Definition, importance, Growth assessment- Measuring weight, height, head circumference, mid upper arm circumference, chest circumference. Growth monitoring and its importance. Differences between growth and development.
- 7. Principles of growth and development- Growth axis, orderly and sequential, individual variations, critical periods, continuous, correlated, individual differences.
- 8. Determinants or factors affecting growth and development- physiological, environmental, psychodynamic and personal factors.
- 9. Role of heredity and environment on growth and development- Definitions and role of heredity and environment prenatal and post natal environment.
- Genetics and genetical abnormalities Genes, chromosomes, autosomes, sex chromosomes, genetic and chromosomal abnormalities- Down's syndrome, Turner's syndrome, Trisomy –X syndrome, Klinefelter's syndrome, XYY Syndrome.
- 11. Stages of human life span- prenatal period, Infancy, toddlerhood, early childhood, adolescence, adulthood, old age.
- 12. Developmental tasks Havighurst, Concept, Definition, developmental tasks across life span
- 13. Domains or areas or aspects of human development and its characteristics- Physical, motor, cognitive, social, emotional, language, moral, self help/ adaptive and aesthetic.
- 14. Introduction to theories of human development- Definition, function or purpose, and criteria of theories.
- 15. Theories on naturalism, Theories on environmentalism- Classical conditioning, operant condition.
- 16. Maturational theory- Arnold Gesell, Stanley Hall
- 17. Need theory- Maslow's Hierarchy of need theory- Physiological, safety, social esteem, self actualization.
- 18. Ecological theory- Bronfenbrennner micro system, meso system, exo system, macro system, chrono system.
- 19. Ethological theory Lorenz, Evolutionary theory- Darwin
- 20. Cognitive theory by Piaget stages of cognitive development- Sensorimotor stage, preoperational stage, concrete operational stage, formal operational stage.
- 21. Social Theories John Bowlby's attachment theory, Vygotsky's socio cultural theory
- 22. Social Theories –Bandura's social learning theory

- 23. Psychoanalytical theory- Frued ego, superego, stages of psychosexual development- oral stage, anal stage, phallic stage, latency stage, genital stage.
- 24. Psychoanalytical theory Erik Erikson Stages of Psycho social development
- 25. Special considerations in research with human subjects- Informed consent, confidentiality, debriefing, deception, minimizing bias.
- 26. Ethical issues in human research- Right to privacy, Right to truth, Right to informed consent, Right to self esteem, Fetal research, Social concerns. Language and Moral research involving humans.
- 27. Trends and challenges in ethical issues- from global to discrete response systems, increase in complexity, increase in integration and differentiation, decrease in egocentrism, development of social autonomy.
- 28. Origins of scientific enquiry- 4 step model of scientific inquiry- asking the question, what factors are important and how to examine, testing original question, accepting or rejecting.
- 29. Research methods and designs in human development- Descriptive research, correlational research, Experimental research. Research strategies- Cross sectional approach and longitudinal approach.
- 30. Methods of data collection- Observation, Survey and interview, Case study, Questionnaire merits and demerits.
- 31. Methods of data collection- Standardized tests, merits and demerits
- 32. Methodology in Human Research definitions variables, hypothesis, sampling, operational definitions, Reliability and Validity.

References:

- 1. Hughes F.P. & Noppe.L.D.(1985). Human Development across the Life Span. West Publishing corporation.
- 2. Nageswara Rao.G.(2012). Research Methodology and Quantitative Methods, BS Publications, Hyderabad.
- 3. Papalia, D.E. and Olds, SW. (1978). Human development. McGraw Hill. Kogakusha, Ltd.
- 4. Santrock, J. (2011). Life span development. 13thed. McGraw Hill Education India Pvt.Ltd..
- 5. Salkind,N.J. (2004). An introduction to Theories of Human Development. Sage Publications, New Delhi.

CSBC 112	Introduction to Rural Sociology	2(2+0)
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Course no: CSBC 112

Title: Introduction to Rural Sociology

Credit hours: 2(2+0)

Objectives:

- To enable the students to
- understand the concept of rural sociology and its structure
- be aware of the process of social change and factors of transformation

• comprehend rural social stratification and it's significance

a. Theory lecture out line

Lesson No.	Торіс
1.	Meaning, scope importance of rural sociology
2.	Relation of rural sociology with agriculture, animal husbandry, economic
3.	Indian rural infrastructure- origin of village, types of villages, resources, demography
4.	Indian village governance- changed scenario- past to present
5.	Structural concepts of rural sociology- groups, classification and functions of groups
6.	Structural concepts of rural sociology- association, community, society
7.	Functional concepts of rural society-meaning and definition of socialization, social system, stratification, social interaction, social control, culture
8.	Social system- harmonic and disharmonic systems, implications
9.	Functional concepts of rural society- culture, characteristics, implications
10.	Social control- norms, values, folkways, taboos, mores
11.	Social interaction- Types, implications
12.	Rural and urban society characteristics and differences
13.	Rural institutions- Family- types and functions & marriage
14.	Family - changing pattern of the rural families
15.	Rural institutions- Religion, Government - types and functions
16.	Rural institutions - Economy, Education - types and functions
17.	Rural social stratification- Forms of stratification-class and caste systems
18.	Rural social stratification - basic notions, changes and its role in economy and policy
19.	Rural social stratification- constitutional provision, categorization and reservations
20.	Land relations and changes- Land topography, ownership patterns,
21.	Land relations and changes- Land reforms
22.	Rural poverty- definition, manifestations and causes
23.	Rural poverty- poverty cycle
24.	Poverty alleviation process- livelihoods- meaning and promotion
25.	Rural social change - Categories and levels of social change
26.	Rural social change - Dimensions & factors of social change
27.	Rural social changes - Processes and factors of transformation
28.	Planned social change - Theories, transformation and shortcomings
29.	Rural social problems- inequality, un-touchability, illiteracy, unemployment

- 30. Rural social problems- child labour, gender discrimination, alcoholism, superstitions
- 31. Rural social reforms- Policies and programmes
- 32. Rural social reforms- Amendments and acts

References:

- 1. Chitambar, J.B. (1973). Introductory rural sociology. New York, John Wilex and Sons.
- 2. Desai, A.R. (1978). Rural sociology in India. Bombay, Popular Prakashan, 5th Rev. ed.

Suggested readings:

- 1. Doshi, S.L. (2007). Rural sociology. Delhi Rawat Publishers.
- 2. Jayapalan, N. (2002). Rural sociology. New Delhi, Altanic Publishers.
- 3. Sharma, K.L. (1997). Rural society in India. Delhi, Rawat Publishers.

CSBC 113Environmental Studies and Disaster Management3(2+1)

- **1.** Course Number : CSBC 113
- 2. Title : Environmental Studies and Disaster Management
- **3.** Credit Hours : 3 (2+1)
- **4. General objective** : To enlighten about the environmental protection through education

5. Specific objectives:

a. Theory

By the end of the course the students will be able to

- Learn about the importance of reuse and recycling of wastes to improve the quality of life
- Understand the role of various environmental protection acts to protect resources
- Be aware of the impact of population explosion on various resources and health issues
- Can learn about the role of information and technology in sharing the earth news from any corner of the world
- Know about the national disaster management framework

b. Practical

By the end of the course the students will be able to

- i. Learn about the environmental problems and role of human beings in protecting the environment
- ii. Understand the availability, accessibility and use of various resources in the nature
- iii. Awareness on the causes of different types of pollution, impact of pollution on health and nature, role of individuals in reducing the magnitude of pollution
- iv. Be alert about the harmful effects of technological advancements on certain natural resources
- v. Empower about the value education and human rights
- vi. Understand about conservation of natural resources at micro and macro level
- vii. Explore about the disaster management strategies

A. Theory lecture outlines

- 1. Multidisciplinary nature of environmental studies definition, scope and importance
- 2. Natural resources renewable and non renewable resources and their associated problems
- Forest resources use and over exploitation, deforestation, timber extraction, mining, dams and their effects on forest and tribal people
- 4. Water resources use and over utilization of surface and ground water, floods, drought, conflicts over water, dams benefits and problems
- 5. Mineral resources use and exploitation, environmental effects of extracting and using mineral resources
- Food resources world food problems, changes caused by agriculture and over grazing, effects of modern agriculture, fertilizer – pesticide problems, water logging and salinity
- Energy resources growing energy needs, renewable and non renewable energy resources, use of alternate energy sources
- Land resources land as a resource, land degradation, man induced landslides, soil erosion and desertification
- 9. Role of an individual in conservation of natural resources, equitable use of resources for sustainable lifestyles
- 10. Ecosystem concept, structure and function of an ecosystem, producers, consumers and decomposers, energy flow in ecosystem, ecological succession, food chains, food webs and ecological pyramids, introduction, types, characteristic features, structure and function, forest, grassland, desert and aquatic ecosystem
- 11. Biodiversity and its conservation introduction, definition, genetic, species, ecosystem diversity and biogeographical classification of India
- 12. Value of biodiversity consumptive use, productive use, social, ethical and aesthetic and option values
- 13. Biodiversity at global, national and local levels India as a mega diversity nation, hot sports of biodiversity
- 14. Threats to biodiversity habitat loss, poaching of wildlife, man-wildlife conflicts, endangered and endemic species of India, in-situ & ex-situ conservation of biodiversity
- 15. Environmental pollution definition, cause and effects, control measures of air, water, soil, marine, noise, thermal and nuclear hazards
- 16. Solid waste management causes, effects, control measures of urban and industrial wastes, role of an individual in prevention of pollution
- 17. Social issues and the environment unsustainable to sustainable development, urban problems related to energy, water conservation rain water harvesting, watershed management
- 18. Environmental ethics issues and possible solution, climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust

- 19. Environmental protection acts air (prevention and control of pollution) act, water (prevention and control of pollution) act, wildlife protection act, forest conservation act, issues involved in enforcement of environmental legislation, public awareness
- 20. Human population and the environment population growth, variation among nations, population explosion
- 21. Role of information technology in environmental and human health
- 22. Natural disasters meaning and nature, types (floods, drought, cyclone, earthquakes, landslides, avalanches, volcanic eruptions, heat and cold waves, global warming, sea level rise, ozone depletion) and its effects
- 23. Man-made disasters nuclear, chemical, biological
- 24. Man made disasters building fire, coal fire, forest fire, oil fire
- 25. Man-made disasters road accidents, rail accidents, air accidents and sea accidents
- 26. Disaster management international strategy for disaster reduction at National levels
- 27. Disaster management Global levels
- 28. National disaster management framework financial arrangements
- 29. National disaster management framework role of NGO's, community based organizations and media,
- 30. National disaster management framework central, state, district and local administration
- 31. National disaster management framework armed forces in disaster response, police and other organizations
- 32. National disaster management framework feeding the people struck by the disaster

B. Practical lecture outlines

- 1. Visit to a local area to document environmental assets river
- 2. Visit to a local area to document environmental assets forest/ grassland
- 3. Visit to a local area to document environmental assets hill/ mountain
- 4. Visit to a local polluted site urban/ rural
- 5. Visit to a local polluted site industrial
- 6. Visit to a local polluted site agricultural
- 7. Study of common plants / insects / birds in forest, grass land and deserts
- 8. Study of simple ecosystems pond / river
- 9. Study of simple ecosystems hill slopes
- 10. Preparation and presentation of report
- 11. Preparation and presentation of report
- 12. Collecting information on a natural disaster management strategies from print media and reporting
- 13. Collecting information on a manmade disaster management strategies from print media and reporting
- 14. Collecting information on a global disaster management strategies from print media and reporting

15. Observing and identifying the disaster management strategies for a minor disaster and reporting

16. Final Practical Examination

References:

- 1. Bharucha, E. (2005). Text book of environmental studies. University Grants Commission, University Press,
- 2. Singh, S. and Singh, J. (2013). Disaster Management. Pravilika Publication Allahabad
- 3. Purohit, Agrawal. 2006. Environmental Pollution. Bharat Printing House, Jodhpur.
- 4. P.D. Sharma. 1975. Ecology and Environment. Rastogi publications. Meerut. India.

Suggested Readings:

- 1. Kapur, A. (2005). Disasters in India: Studies of grim reality. Rawat publication, Jaipur New Delhi.
- 2. Chauhan, B.C. (2008). Environmental studies. University Science Press, New Delhi.
- 3. De, A.K. (2010). Environmental chemistry. Willey Eastern ltd. New Delhi.
- 4. Brig Khanna, Nina Khanna. 2011. Disasters. New India Publishing Agency, New Delhi.

CSBC 114	National Services Scheme	2(0+2)
CSBC 115	Physical education and yoga1	(0+1)

NSS/NCC/Physical Education & Yoga Practices Credit hours: 2(0+2)

Theory

Course aims at evoking social consciousness among students through various activities viz., working together, constructive and creative social work, to be skilful in executing democratic leadership, developing skill in programme development to be able for self employment, reducing gap between educated and uneducated, increasing awareness and desire to help sections of society.

Following activities are to be taken up under the NSS course:

- Introduction and basic components of NSS: Orientation
- NSS programmes and activities
- Understanding youth
- Community mobilisation
- Social harmony and national integration
- Volunteerism and shramdan
- Citizenship, constitution and human rights
- Family and society
- Importance and role of youth leadership
- Life competencies
- Youth development programmes
- Health, hygiene and sanitation
- Youth health, lifestyle, HIV AIDS and first aid
- Youth and yoga
- Vocational skill development

- Issues related environment
- Disaster management
- Entrepreneurship development
- Formulation of production oriented project
- Documentation and data reporting
- Resource mobilization
- Additional life skills
- Activities directed by the Central and State Government

All the activities related to the National Service Scheme course is distributed under four different courses viz., National Service Scheme I, National Service Scheme II, National Service Scheme III and National Service Scheme IV each having one credit load. The entire four courses should be offered continuously for two years. A student enrolled in NSS course should put in at least 60 hours of social work in different activities in a semester other than five regular one day camp in a year and one special camp for duration of 7 days at any semester break period in the two year. Different activities will include orientation lectures and practical works. Activities directed by the Central and State Government have to be performed by all the volunteers of NSS as per direction.

SYLLABUS

Semester I

Course Title: National Service Scheme I

Introduction and basic components of NSS:

Orientation: history, objectives, principles, symbol, badge; regular programmes under NSS, organizational structure of NSS, code of conduct for NSS volunteers, points to be considered by NSS volunteers awareness about health

NSS programmes and activities

Concept of regular activities, special camping, day camps, basis of adoption of village/slums, conducting survey, analysing guiding financial patterns of scheme, youth programme/ schemes of GOI, coordination with different agencies and maintenance of diary

Understanding youth

Definition, profile, profile, categories, issues and challenges of youth; and opportunities for youth who is agent of the social change

Community mobilisation

Mapping of community stakeholders, designing the message as per problems and their culture; identifying methods of mobilisation involving youth-adult partnership

Social harmony and national integration

Indian history and culture, role of youth in nation building, conflict resolution and peace-building

Volunteerism and shramdan

Indian tradition of volunteerism, its need, importance, motivation and constraints; shramdan as part of volunteerism

Citizenship, constitution and human rights

Basic features of constitution of India, fundamental rights and duties, human rights, consumer awareness and rights and rights to information

Family and society

Concept of family, community (PRIs and other community based organisations) and society

1st Year 2nd Semester

CSBC 121

Technical Writing (English)

2 (1+1)

Course No. – CSBC 121

Title – Technical Writing (English)

Credit hours 2 (1+1)

General Objective: - To enable the students to strengthen the writing skills and improve their vocabulary

Specific Objectives: - By the end of the course the students will be able to

Theory: -

- Write a technical paper confidently
- Increase the vocabulary
- Write a scientific paper in a convincing manner

Practicals: -

- Learn the basic of English Writing.
- Write English with a flow.
- Master the art of English Writing

Theory Lecture Outlines: -

- Style: Definition of Style, Introduction to different styles of writing
- Writing process: steps involved in the writing of a scientific paper
- Interview: Definition of interview, how to prepare for an interview.
- Types of interviews Tips to succeed in an Interview.
- Paragraph writing Essentials of paragraph writing Definition, requirements of a good paragraph.
- Topic sentence various orders to develop a paragraph
- Inductive, Deductive, Question to answer, Exposition, Time, Order, Comparison, Contrast, Enumeration, Space, Order
- Report writing Definition and cardinal characteristics of report.
- Types of Report Writing Examples of different types of reports.
- Analyzing the report, Report formats.
- Oral & Written Reports Informational & Interpretative Report.
- Technical correspondence General principles of technical correspondence, parts of a letter (Heading, Address, Salutation, Body, Complimentary closing, Signature).
- Types of letters Letters giving instructions, enquires and answers to enquiries, complaints and adjustments, letter urging action, applications and resumes.

- Proposal writing Definition and kinds of proposal, Division of formal proposal Front matter, letter of transmittal Title page, summary or abstract, table of contents, statement of request and body.
- Writing scientific and semi-technical articles Source material, Topic selection, Literature review, Tables, Figures, Foot notes, Bibliography.
- Revision & Feedback.

Suggested Readings:

- 1. Bansal, RK and Harrison, JB Spoken English, Orient Longman, New Delhi
- 2. Krishnamohan and Banerjee, M Developing communication skills. MacMillan
- 3. Alvarez, J.A The elements of technical writing, New York: Harcourt.

Technical writing (English) (1+1)

Practical Lecture Outlines

- Phonetics Introduction and definition
- Study of sound patterns
- Symbols Spoken English
- Differences of symbols in spoken and written English
- Vowels Pure vowels of spoken English
- Organs of speech
- Place and manner of articulation
- Voiceless and voiced words
- Report writing- Definition and purpose
- Types of reports
- Paragraph writing
- Letter writing
- Writing of scientific articles
- Tips of a good writing
- Feed back
- Final practical exam

FDNT 121	Food Science and Processing	3(2+1)
Course Number:	FSNT 121	
Title :	Food Science and processing	
Credit Hours:	3 (2+1)	
General Objective:	To impart knowledge about basic principles of	different methods of
	cooking, different food groups, their composition, nutr	itive value, methods c

processing, byproducts, storage, role of different food groups in cookery,

changes in nutrients in processing, cooking, storage and preservation.

Specific Objective:

a) Theory:

By the end of the course students will be able to

- Know about the basic principles of each individual cooking method and can identify the best method of cooking for different food groups to retain maximum of nutrients
- Learn about amount of nutrients present in different food groups, their byproducts and affect of cooking and processing on nutrients.
- Learn role of each food group in cookery
- Learn different methods of storage and preservation and best method of preservation applicable for each food group

b) Practical :

By the end of the course students will be able to

- Learn about different methods of cooking and changes that take place by each method in various food groups.
- Learn the role of various food groups in cookery and acquire the skill of enriching food groups with various food groups to produce qualitative and nutritive recipes.
- Learn the skill of quantifying ingredients for different number of servings and evaluating recipes in terms of sensory and nutritive quality.
- Acquire the skill of handling and retaining the maximum nutrients in processing and cooking

A) Theory lecture out lines

- 1. Food groups classification, Food in relation to health
- 2. Food Guide pyramid and its importance, Foods as a source of nutrients.
- 3. Objectives of cooking, preliminary preparations, processing, preservation.
- 4. Methods of cooking- Wet methods- boiling, simmering, poaching, stewing, blanching, steaming, pressure cooking- their merits and demerits.
- 5. Methods of cooking Dry methods- roasting, grilling, toasting, baking, sautéing, frying -their merits and demerits.
- 6. Effect of cooking and heat on nutritive value of foods.
- 7. Cereals, millets: rice, wheat, goldenrice, oats, rye, barley, millets- maize, jowar, ragi, bajra, quinoa, composition and nutritive value, types, storage, processing.
- 8. Cereal cookery: Gluten and factors affecting the gluten formation, cereal starch, gelatinization, dextrinization.
- Pulses: composition and nutritive value, types, digestability of pulses, factors that reduce digestibility of pulse proteins, storage, processing-soaking, germination,fermentation,parching,puffing,extrusion
- 10. Effect of cooking, factors affecting cooking quality, toxic constituents in pulses-trypsin inhibitor, lathyrogens, favism, haemagglutinins, cyngenic glycoside, saponins, goitrogens
- 11. Nuts and oilseeds- composition and nutritive value, types, storage, oil extraction, processing.

- 12. Toxic constituents and role in cookery- effect of cooking, factors affecting cooking quality,role of pulses and nuts in cookery
- 13. Milk and milk products: composition and nutritive value, properties, processing and packaging.
- 14. Milk cookery -Effect of heat, acid, enzymes, microbes, processed and indigenous milk products and their quality.
- 15. Milk products, milk substitutes, Functional properties of milk and curd, Role of milk and milk products in cookery-
- 16. Eggs- structure, composition and nutritive value, storage.
- 17. Evaluation of quality of egg, role of egg in cookery.
- 18. Flesh foods- Meat structure, composition and nutritive value, types, storage.
- 19. Brief description of aging , tenderization and curing of meat.
- 20. Fish- selection, structure, composition and nutritive value, storage.
- 21. Poultry- structure, composition and nutritive value, storage.
- 22. Vegetables -composition and nutritive value, types, storage, selection, post-harvest changes.
- 23. Effect of processing, preservation and cooking on different pigments of vegetables.
- 24. Fruits composition and nutritive value, types, storage, selection, post-harvest changes.
- 25. Sugar and its products: composition and nutritive value, types, function, properties, stages in sugar cookery, role of sugar in cookery.
- 26. Fat and oils composition, nutritive value.
- 27. Role of fat in cookery and importance in daily diet.
- 28. Spices and herbs- types and its use.
- 29. Beverages and appetizers classification, use in everyday lives, tea, coffee, cocoa and alcoholic drinks.
- 30. Leavening agents classification and functions.
- Processed and convenience foods, Ready to eat foods, frozen foods, dehydrated foods, instant food mixes.
- 32. Pre final examination

B) Practical Lecture Outlines

- 1. Objectives of Laboratory Experiments and Orientation to Equipment used in laboratory.
- 2. Weighing and Measuring Food items, Identification of food grains, Condiments and spices
- 3. Introduction to Processing of Cereals.
- 4. Processing of Millets.
- 5. Processing of Pulses.
- 6. Processing of Fermented Cereal and Pulse Mixtures.
- 7. Processing of Vegetables.
- 8. Processing of Milk and Milk Products.
- 9. Processing of Egg.
- 10. Processing of Meat, Poultry and Fish.

- 11. Preparation of Soups, Salads.
- 12. Preparation of Beverages.
- 13. Preparation of Accompanying Side Dishes.
- 14. Preparation of Sugar based products.
- 15. Preparation of Snacks and Bakery items.
- 16. Practical Examination.

References:

- 1. B. Srilakshmi Food Science , New Age International Publishers, sixth edition
- 2. Swaminathan , M. (1988). Handbook of Food science and Experimental Foods BAPPCO, Bangalore.
- 3. Shakuntala Manay N, Shadaksharaswamy M (1998). Foods, Facts and principles New age international publishers, New Delhi.

APTX 121Fundamentals of Clothing Construction3(1+2)

- 1. Course No: APTX 121
- 2. Title : Fundamentals of Clothing Construction
- 3. Credit Hours: 3(1+2)
- 4. **General Objective** : To understand different methods of garment construction, know about the criteria used to select fabric and garments for different age groups
- 5. Specific Objective:
- a) Theory

By the end of the course, student will be able to

- To understand the techniques employed for garment construction
- To learn different seams and seam finishes, methods to control and release the fullness, to learn different temporary and permanent basic stitches.
- To analyse various methods of preparing the fabric for cutting .
- To design and make basic clothing articles like apron, bib, panty/ bloomers, slip for different age groups.

b) Practical

By the end of the course, student will be able to

- Gain comprehensive knowledge regarding tools and equipment, the basic parts, use, care, repair and maintenance of the sewing machine
- Develop skill in different garment construction techniques
- Understand various seams , seam finishes, unit construction methods, etc
- Enhance knowledge in different fastening materials, trimmingsmethods
- Attain knowledge and skill in apparel suggestion for different age groups

A) Theory Lecture Outlines

- 1. Terminology related to clothing construction
- 2. Sewing tools and equipment's required for measuring, drafting, cutting and stitching;

- 3. Selection and preparation of fabric for garment construction;
- 4. Layout of paper pattern, marking, cutting and stay stitching;
- 5. Unit construction method;
- 6. Importance and function of clothes
- 7. Socio- economic and psychological factors affecting clothing choices;
- 8. Consumer behaviour and motivation;
- 9. Clothing requirements of different age groups: infant,
- 10. Clothing requirements of different age groups: toddler,
- 11. Clothing requirements of different age groups: pre-schooler
- 12. Clothing requirements of different age groups: school age children
- 13. Clothing requirements of different age groups: teenager, adolescent
- 14. Clothing requirements of different age groups: adult
- 15. Clothing requirements of different age groups: senior citizen
- 16. Application of elements and principles of art in apparel designing.

B) Practical Lecture Outlines

- 1. Demonstration on: Sewing equipments and tools
- 2. Demonstration on: sewing machine and its care
- 3. Preparation of samples: Hand stitches- basting, slip-stitching
- 4. Preparation of samples: smocking,
- 5. Preparation of samples: Hand stitches-hemming,
- 6. Preparation of samples: Hand stitches-over casting,
- 7. Attaching fastener and button holing,
- 8. Mending and patching Machine stitches
- 9. Stitching Seam
- 10. Types of Seam finishes
- 11. Stitching different types of pleats
- 12. Stitching different types of gathers
- 13. Stitching different types of tucks
- 14. Stay stitch, under stitching
- 15. Stitching placket opening- single, double
- 16. Demonstration on taking body measurements
- 17. Preparation of fabric for cutting, and layout of paper pattern on different fabrics patterns including plain, print, lines, plaid and check.
- 18. Designing and drafting of frock
- 19. Cutting and stitching of Baby frock
- 20. Cutting and stitching of Baby frock
- 21. Finishing of frock
- 22. Drafting, cutting of panty
- 23. Stitching of Panty

- 24. Drafting, cutting of Bloomer
- 25. Stitching of Bloomer
- 26. Finishing of Bloomer
- 27. Taking measurements for blouse
- 28. Drafting of blouse
- 29. Cutting of blouse and tacking
- 30. Stitching of Blouse
- 31. Stitching of blouse
- 32. Finishing of blouse
- 33. Display

References:

- Carson, B. (1969), How You Look and Dress. 4th ed. New York. Webster Division, McGraw-Hill Book Company.
- 2. Jewel R. (2010) "Encyclopedia of Dress Making" A.P.H. Publishing Corporation, New Delhi
- Kefgen, M. and Phyllis, T.S. (1971) Individuality in Clothing Selection and Personal Appearance. New York. The Macmillan Company
- 4. Mazumdar L. & Vatsala R. "Textbook of fundamentals of clothing construction", ICAR
- Rosencranz, M.I. (1972) Clothing Concepts- A Social and Psychological Approach. New York. The Macmillan Company Ltd.

RMCS121		System Dynamics and Management of Resources	2(1+1)
1.	Course Number	: RMCS 121	

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- **2. Title** : System Dynamics and Management of Resources
- **3.** Credit Hours : 2(1+1)
- **4. General objective** : To provide knowledge about the principles of management and their application in managing the resources.

5. Specific objectives:

b. Theory

By the end of the course the students will be able to

- To create an awareness on the importance of management at individual and family levels
- To understand the basics of management as a process and systems approach to management
- To help in identifying and understanding the application of principles of management for different resources

c. Practical

By the end of the course the students will be able to

- Identification and understanding of individual and family values, goals and standards
- Identify and solve problems through decision making process
- Applying the management principles to various resources at individual and family level

A. Theory lecture outlines

- 1. Introduction to Management concepts
- 2. Family lifecycle stages and its effect on managerial functions
- 3. Systems approach to management
- 4. Family systems and its subsystems Family environments interaction of environments
- 5. Motivating factors of management- value Origin, classification and role in management
- 6. Motivating factors of management goals Origin, classification and role in management
- 7. Motivating factors of management standards Origin, classification and role in management
- 8. Resources definition, types, guidelines for use of resources and factors affecting
- 9. Decision making Importance, types, Decision Making process
- 10. Decision making Steps in decision making, Factors affecting decision making
- 11. Management process Planning importance, types, characteristics and techniques,
- 12. Management process Organizing; Definition and meaning
- 13. Management process Controlling- definition, phases and factors,
- 14. Management process Evaluating and Feed back definition and types of evaluating
- 15. Time Management Concepts of Time Management, Tools of time management, and process of time management
- 16. Money Management Process of money management

B. Practical lecture outlines

- 1. Identification and listing of individual and family values
- 2. Identifying and listing individual and family goals
- 3. Identifying and listing individual and family Standards
- 4. Identifying and listing human and non human resources, community resources
- 5. Identifying types of decisions taken by individuals and families
- 6. Applying decision making process individual decisions and presentation of reports
- 7. Applying decision making process group decisions and presentation of reports
- 8. Application of managerial process to organize an event planning
- 9. Application of managerial process to organize an event implementing
- 10. Application of managerial process to organize an event evaluation
- 11. Management of personal time record for a week
- 12. Presentation of personal time record
- 13. Identifying types and sources of family income
- 14. Preparing sample budgets
- 15. Evaluation and presentation of budget
- 16. Final practical examination

References:

- 1. Mann, M.K. (2004). Home Management for Indian Families, Kalyani Publisher Ludhiana
- 2. Nickell, P. and Dorsey, J.M. (1970). Management of Family Living. Wiley Eastern, New Delhi

 Vargeese, M.N. Ogale, N.N. and Srinivasan, K. (1992). Home Management, Wiley Eastern, New Delhi.

Suggested Readings:

- 1. Krishna Oberoi (2006). Resource Management for Better Homes. R.K. Offset, Delhi.
- Bhargava, Bela. (2005). Family Resource Management and Interior Decoration. Apple Printer and V. R. Printers, Jaipur.
- 3. Duvall E.M. 1967. Family Development, Lippincott JB Company, Philadelphia, New York,
- Moore T.J, Asay M.S. 2013. Family Resource Management, Second Edition, Sage Publications, New Delhi,
- Gross H.I, Crandall E.W, Knoll M.M. 1980. Management for Modern Families. Prentice Hall, Inc., Eaglewood Cliffs, New Jersey.

HI	DFS 121	Life-Span Development 3(2+1)
1.	Course No	: HDFS 121
2.	Title	: Life-Span Development
3.	Credit hours	: 3(2+1)
4.	General objective	: To impart knowledge about various stages of life span
		development, concepts of human development, development from
		conception to old age, factors effecting growth and development of
		different stages and recent issues in growth and development

5. Specific objectives

By the end of the course, the student will be able to

- a) Theory
 - Understand the issues and concepts associated with conception
 - Learn different stages of life-span development
 - Know stimulating approaches for optimizing development from infancy to old age
- b) Practical
 - Gain practical knowledge in collecting base line data related to various areas of development
 - Understand the development across the life span through case studies
 - Learn planning programmes for optimizing development of young children

A) Theory lecture outlines

- 1. Issues and scientific concepts associated with conception Influence of genes on development, Genes and Chromosomes, Genetic transmission patterns, Chromosomal abnormalities
- 2. Stages of Prenatal development Conception, Ovulation, Fertilization, Period of ovum, Period of embryo, Period of foetus, Complications of fertilization Ectopic Pregnancy, Multiple pregnancies

- Care during pregnancy Diet and Nutrition, Exercise, Personal hygiene, Dress and attire, Social support, Immunization, Major and minor discomforts during pregnancy, Complications during last trimester of pregnancy
- 4. Factors influencing Prenatal development Effects of unfavourable prenatal conditions Emotional factors/ maternal stress, Drugs, Radiation, Smoking, Diseases, Accidents, Deficiency, Maternal Age, Parity, Common physical hazards during prenatal period Period of the ovum, Period of the Embryo, Period of the Foetus
- 5. Labour / birth Labour, Contractions, The stages of labour, Types of birth, Complications during delivery, reflexes of new born
- 6. Care of new born and nursing mother Care of new born baby, Bathing, Clothing, Diapering, Lifting Babies, Sleeping Facilities/ Pattern, Attending to the Child's Cries, Health Care, Immunization, Care of the nursing mother -The breast, Perineal care, Pulse and temperature, Lochia, Bladder irregularities, Bowel movement, Convalescence after child birth, Nutritional care.
- Physical and motor development during infancy Principles of physical development, Components
 of Physical Growth During Infancy, Principles of motor development, Motor development during
 infancy, Developmental norms / milestones.
- Cognitive and language development during Infancy Cognitive development The sensory motor period, Space and time, Memory, Language development – Properties of language, Theories of language acquisition, Biological and maturational factors, The role of the family.
- Socio emotional development during infancy Social Development during infancy, Emotional Development during infancy- Bridge's classification of emotions, Individual Differences in responding to emotions, Emotional regulation.
- Factors influencing growth and development during infancy, care of an infant Feeding Breast Feeding, Artificial feeding, supplementary feeding / weaning, Failure to thrive (FTI) infants.
- Physical and motor development during preschool period Physical Development during preschool period - Body proportions, Bones, Muscles, Teeth, Motor development during preschool period -Gross motor development, Fine motor development, Perceptual motor development, Handedness.
- Cognitive and language development during Preschool period Cognitive process, Piaget's stages of cognitive development, Language development – Characteristics of children's language, Language skills during preschool period, Stages of language development
- Socio emotional development during preschool period- Socialization definition and process, Techniques of socialization, Agents for socialization, Emotions – types, Bridge's classification of emotions, Characteristics of children's emotions,.
- 14. Factors influencing growth and development during preschool period Antecedent influences for cognitive, language, socio-emotional, Physical and motor development during preschool period
- Physical and motor development during school age Physical development Height, Weight, Body proportions, Skeletal and muscular growth, Brain Development, Motor development -Importance, Constituents of motor behavior, Types of motor skills

- 16. Cognitive and language development during school age Piaget's stages of cognitive development
 concrete operational stage, Changes in intellectual / mental operations, Ways of promoting cognitive development, Language development Development of Syntax, Semantics, Pragmatics, Children's literacy.
- Socio development during school age Learning socially appropriate roles, Development of social interactions - Childhood gangs, Forms of social groups, Popularity and Social isolation, Socialization and its influence on the personality of the school age child.
- Emotional and Moral development during school age Emotional Development Common emotions, Emotional dominance, Balance and Control of emotions- Emotional catharsis, Moral development – Components of moral development, Kohlberg's stages of moral development
- Factors influencing growth and development during school age Antecedent influences for physical and motor, cognitive, socio-emotional, moral development during school age, Hazards during school age
- Puberty Physical changes, Changes in physical growth, Changes in body dimensions, Development of sexual characteristics/sexual maturation, Physiological changes. Adolescence-Concept, Phases, Physical development during adolescence.
- 21. Cognitive development during adolescence Transitions, stages Piaget's stage of cognitive development -Formal Operational Stage, Adolescent's egocentrism, Implications of formal thought
- 22. Socio development during adolescence Social behavior, Peer group, Stages of development of peer group, Structures of Peer Group
- 23. Emotional development during adolescence Components of Emotional development, Developmental changes in emotional functioning.
- Identity development during adolescence Identity meaning, Identity development, Theories of Identity Development – Erickson and Marcia, Identity problems during adolescence, Preventive strategies.
- 25. Factors influencing growth and development during adolescence Antecedent influences for cognitive, moral, socio-emotional development during adolescence
- Development during early and middle adulthood Early adulthood Physical development, Sexuality, Cognitive development, Socio emotional development, Middle adulthood – Physical development, cognitive development, Socio emotional development.
- 27. Factors influencing growth and development during adulthood Antecedent influences for growth and development during adulthood.
- Physical, Cognitive development during old age Physical development, Longevity, Health, Cognitive development – Cognitive functioning, Multidimensionality and Multi directionality, Education, work and health, Training cognitive skills.
- 29. Socio-emotional development during old age theories of emotional development
- 30. Factors influencing growth and development during old age Antecedent influences for growth and development during old age
- 31. Stimulating approaches for optimizing development Stimulation- meaning, areas of stimulation

 Major issues in growth and development – Nature Vs Nurture, Critical period Vs. Unlimited Plasticity, Continuity Vs Change, Activity Vs Passivity.

B) Practical lecture outlines

- 1. Observational visits to well-baby clinic to observe full term and preterm babies
- 2. Study on developmental status of an infant
- 3. Study on developmental status of a preschool child
- 4. Assessing Physical development of an infant/ a preschooler using Anthropometry
- 5. Planning stimulation programmes for optimizing development of an infant
- 6. Implementing stimulation programmes for optimizing development of an infant
- 7. Planning stimulation programmes for optimizing development of a preschooler
- 8. Implementing stimulation programmes for optimizing development of a preschooler
- 9. Case study of a school age child
- 10. Case study of an early adolescent
- 11. Studying Vocational interests of Late Adolescent
- 12. Study on Marital adjustments during young adulthood
- 13. Study on Role satisfaction in Middle adulthood
- 14. Study on Happiness Index of Aged
- 15. Preparation of resource files on recent issues related to various stages of life span
- 16. Final Practical Examination

References:

- 1. Berk.E.Laura (2013): Exploring Life span development,3rdedi. McGraw Hill. New York.
- Lawrence B.Schiamberg. (1985): Human Development, 2nd edi. Macmillan Publishing Company, New York.
- 3. Papalia. D.E. and Olds.SW.(2008): Human development,11thedi.McGraw Hill. New York.
- Richard Fabes Carol Lynn Martin. (2003): Exploring Child Development, 2nd edi. Allyn & Bacon Publication, New York.
- Santrock.John.(2011): Life span development,13thedi. McGraw Hill Education (India) Private Limited, New Delhi.

EECM 121	Extension and Rural Development	3(2+1)
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Course No: EECM.121

Title: Extension and Rural Development

Credit hours: 2 (2+1)

Theory objectives:

To enable the students to

- understand the concept of extension and rural development
- be aware of the community programmes from pre independence era to current programmes
- comprehend the role of ICAR and SAUs in rural development

Practical objectives

To enable the students to

- have practical exposure to the functions of village institutions
- observe the rural development programme of Government and non-government

a. Theory lecture out lines

- 1. Extension Education –History, concept, scope and importance
- 2. Extension Education- philosophy, principles and objectives.
- 3. Evolution of extension education glimpses of pre independence era.
- 4. Evolution of extension education glimpses of post independence era.
- 5. Community: Meaning and types of communities, community and science
- 6. Community mobilization Leadership, Qualities of a leader, Types of leaders
- 7. Community participation PRA- Characteristics and Techniques of PRA
- 8. Community development programmes- History and concept, objectives, types
- 9. Community development organization, activities, achievements and shortcomings
- 10. Community development National extension service
- 11. Rural development concept, need, meaning
- 12. Rural development- Aim and objectives, functions of extension education for rural development.
- 13. Panchayati Raj Institutions Concept, structure and functions.
- 14. Five year plans History, year wise objectives NITI ayog
- 15. Current rural development programmes orientation on target oriented, area oriented, income generating and minimum needs programmes
- 16. Area development programmes –IADP and other intensive agriculture programmes of ICAR
- 17. Area development programmes IRDP, DWMA
- 18. Income generating programmes MGNREGA, SGSY
- 19. Income generating programmes SGSY
- 20. Minimum needs programmes Anthyodaya, IAY
- 21. Total sanitation schemes/ campaigns Nirmal Bharat Abhiyan Community Led Sanitation

(CLTS), Swachabharath campaign etc.,

- 22. Current rural development Organisations state and national level
- 23. ATMA objectives, organizational setup
- 24. Tribal development programmes Hill area development Programme, ITDA
- 25. Women and Child development programmes ICDS
- 26. Women and Child development programmes KGMV and other current central and state programmes
- 27. ICAR Organisational setup and role in rural developmentw
- 28. Role of SAUs Colleges, RARS and Agricultural Research Stations in rural development
- 29. KVKs Objectives, Organisational setup and functions
- 30. DAATTCs Objectives, Organisational setup, functions
- 31. NGOs/ Voluntary agencies in rural development characteristics and role
- 32. Implementation institutions for social welfare CAPART, CSWB,RMK

Practical Lecture Outlines

- 1. Village visit to adopted village for orientation towards rural life
- 2. Observation of village infrastructure
- 3. Visit to rural institutions- Grama panchayath
- 4. Visit to rural institutions- Rural bank and Cooperative Societies
- 5. Observation of farm and non-- farm economic activities
- 6. Observation of rural occupations
- 7. Interaction with self Help Groups
- 8. Interaction with grass root level workers-AWW, ANM, Village Secretary
- 9. Interaction with political leaders
- 10. Visit to KVK/DAATTC
- 11. Observation of education programmes
- 12. Observation of health programmes
- 13. Observation of welfare programmes- women, children, youth and farmers
- 14. Visit to Non Government Organisations
- 15. Presentation of reports
- 16. Practical exam

References:

1. Ray, G.L. (2003), Extension Communication and Management. Kalyani Publishers. Fifth revised and enlarged edition.
Dahama, O.P. and Bhatnagar, O.P. (2003). Education and Communication for Development. Oxford and IBH Publishing Co. Pvt. Ltd.

Suggested Readings

1. Sandhu, A.S. (1993) Textbook on Agricultural Communication: Process and Methods. Oxford and IBH Publishing Co. Pvt. Ltd.

2. Chitambar, J.B. (2008). Introductory Rural Sociology. New Age International (P) Limited.

3. Sachdeva, D. R. and Bhushan, V (2007). An Introduction to Sociology. KitabMahal Agency.

CSBC 122	Principles of Biochemistry 3	B(2+1)
Theory :		
1.	Recapitulation of basic chemistry and biology	
2.	Water ,pH and buffers, acid -base balance	
3.	Cellular constituents, structure and function	
4.	Amino acids – structure and chemical properties	
5.	Proteins- properties and classification	
6.	Carbohydrates-classification and properties	
7.	Polysaccharides-classification, structure and properties	
8.	Lipids –classification, properties, fatty acids, saturated and unsaturated and esse properties	ential
9.	Phospholipids and their importance	
10.	Nucleic acids-nucleosides, nucleotides and DNA, properties	
11.	Several RNA's and their properties	
12.	Vitamins-Fat soluble: A, D, E, K	
13.	Water soluble- complex and C vitamin	
14.	Mineral elements and their importance	
15.	Enzymes- classification, function and properties	
16.	Enzymes -kinetics, competitive inhibition	
17.	Basic concepts of bioenergitics	
18& 19	Carbohydrates metabolism and Glycolysis,	

Gluconeogenesis, glycogenesis and glycogenolysis

20 HMP pathway & TCA cycle and energetic

- 21 Electron transport chain
- 22 Basic concepts of photosynthesis, light phase and dark phase
- 23 Lipid metabolism- fatty acid synthesis
- 24 α , β , ω oxidation of fatty acids
- 25&26 Amino acid metabolism
 - 27 Several reactions of nitrogen assimilation
 - 28 Urea cycle
 - 29 Biosynthesis of DNA and RNA and replication
- 30&31 Protein structure –transcription and translation
 - 32 Genetic code ,regulation of gene expression

Practical

- 1. Introduction and handling of chemical balance, chemicals etc.
- 2. Preparation of standard solutions, buffers and colloidal solutions
- 3. Determination of pH
- 4. Qualitative tests of carbohydrates
- 5. Qualitative tests of amino acids
- 6. Demonstration on titrimetric method of analysis
- 7. Quantitative estimation of soluble sugars
- 8. Demonstration on estimation of nitrogen by kjeldhal method
- 9. Demonstration on estimation of fat by soxhlet method
- 10. Determination of acid value
- 11. Determination of saponification value
- 12. Determination of iodine number
- 13. Demonstration on paper chromatography
- 14. Demonstration on thin layer chromatography
- 15. Demonstration on peroxide activity
- 16. Practical examination

References: Text books

- 1. Satyanarayana ,U (2016).Essentials of Biochemistry, Books & allied(P) Ltd, Kolkata
- 2. West ,E.S., Todd, W.R., Mason, H.S and Van Bruggen, J.T. 4th edition. Book of biochemistry, Amerind publishing Co .Pvt, Ltd.
- 3. Murray, R.K., Grannen, D.K., Mayes, P.A and Rodwell, V.W. Harpers biochemistry. Lange medical book

Suggested readings:

- 1. Conn, E.E., Stumpf, P.K., Bruening, G. and Doi, R.H. 1995. *Outlines of Biochemistry*. John Wiley and Sons Inc., Singapore
- 2. Nelson DL & Cox MM. 2004. Lehninger Principles of Biochemistry. 4th Ed. MacMillan
- 3. Voet, D. and Voet, J.G. 2004. *Biochemistry*. John Wiley and Sons Inc., USA.
- 4. Jayaraman, J. 1980. Laboratory Manual in Biochemistry. Wiley Eastern Publishers, New Delhi.

- 5. Plummer, D.T. 1988. An introduction to Practical Biochemistry. 3rd ed. Tata McGraw-Hill Publishing Co., New Delhi
- 6. Hames ,B.D., Hooper, N.M and Houghton,J,D.1997.Instant notes in biochemistry. BIOS scientific publishers

CSBC 123 Agricultural Informatics Credits: 3(1+2)

Title: Agricultural Informatics

Credit hours: 3 (1+2)

A) General objectives:

To impart knowledge about the basics of computers, the word processing, arithmetic operations, database preparation and presentation through various internet sources in terms of Health, Nutrition and other Developmental communications

B) Specific objectives:

Theory objectives:

To enable the students to

- understand the basics of computers and operating systems
- be aware of different software for word processing, arithmetic and statistical operations
- learn the concept of Power point presentations
- attain knowledge about database preparation

Practical objectives:

To enable the students to

- have practical exposure to the components of computer operating systems
- learn about the word processing, arithmetic operations, power point presentations and database preparations
- gain knowledge about World Wide Web, HTML and XML coding

Course Outline:

THEORY:

Lesson No.

Name of the Topic

- 1. Introduction to computers History of Computers, Uses and Types of Computers
- 2. Anatomy of Computers Parts of Computers and functions
- 3. Input and Output devices Types & their uses
- 4. Memory Memory concepts, Units of memory, Memory Devices
- 5. Computer Programming Concepts, Computer program, Programming languages, Role of Computer programmer, Flow charts of computer programs, Psuedo code

- 6. Operating system History, Definition and functions of operating Systems and their software
- 7. Word processing MS- Office, Application of MS-Office for creating, editing and formatting a document
- 8. MS Word Components of the MS Word software, settings, Data presentation, tabulation and graph creation, Shortcut keys
- 9. MS EXCEL Components of MS Excel, Spreadsheets, Workbooks, basics of MS Excel, mathematical expressions, statistical analysis and graph creation and shortcut keys
- 10. MS Power point Concept, purpose and Components of MS Power point, Designing and presentation of power points, templates, styles, inserting images, illustrations, Clipart, Audio and Video and Animation of the presentation
- 11. Database- Concepts and Need of Database, backup and restoring database and storage
- 12. MS ACCESS Components, files, fields, tables and Records, Creating database tables, datasheets, Entering records and keys, Access Windows, Navigation, Creating and queries and query wizards and generating reports
- 13. MS ACCESS Entering records and keys, Access Windows, Navigation, Creating and queries and query wizards and generating reports
- 14. DBMS Uses of DBMS in Health, Nutrition and other Developmental communications
- 15. World Wide Web (WWW)- Concepts, components and Creation of web
- 16. HTML, XML Purpose and coding

PRACTICAL:

Lesson No.

Name of the Topic

- 1. Anatomy of Computers Study of computer components, accessories
- 2. Practice of important DOS commands.
- 3. Introduction of different operating systems such as windows, Unix and Linux
- 4. MS Word Identifying components and understand their functions, Creating files and folders
- 5. MS Word Font styles, formatting and Editing & settings
- 6. MS Word Creating tables, page layout, setup and file management
- 7. MS Word Insert images, themes and designs.
- 8. MS Word Presentation of Prepared data
- 9. MS Power point for creating, editing and presenting a scientific document
- 10. MS Power point Creating, editing and presenting a scientific document
- 11. MS Power point Creating, editing and animation, and designs

- 12. MS Power point Creating, editing and handling of video tools, Clip art tool, graphics, and template
- 13. MS EXCEL Identifying components and understand their functions, Creating spread sheets, workbooks and worksheets and shortcuts
- 14. MS EXCEL Working with data, Inserting images, tables, charts and graphical illustrations, Page setup and dialog box management
- 15. MS EXCEL Writing expressions, creating graphs, analysis of scientific data, handling macros,
- 16. MS EXCEL Cell settings rows and columns and formatting
- 17. MS EXCEL Working with Arithmetic and Statistical operations
- 18. MS EXCEL Presentation of Prepared data
- 19. MS Power point Creating and editing Power points
- 20. MS Power point Designing and Inserting Animations
- 21. MS Power point Adding Audio and Video to the Power point
- 22. MS Power point Presentation of Power point presentations
- 23. MS-ACCESS: Creating database, preparing of queries
- 24. MS-ACCESS: Preparing of reports
- 25. Introduction to Internet Open an Email account
- 26. World Wide Web (WWW) Introduction to Components of World wide Web
- 27. World Wide Web (WWW) Website creation of scientific website
- 28. Mobile Devices: Use of smart phones and other devices for health warning signs and dietary management
- 29. Mobile Devices: Presentation and management of health information through web
- 30. Hands on practice on preparation of decision support system.
- 31. Hands on practice on preparation of decision support system.
- 32. Practical examination

References

- 1. Know your Desktop (1999) A.P. Tech. Limited, Elite Auto House, Andheri (East) Mumbai 400093
- Lab exercises for M S Office (1999) A. .P. Tech. Limited, Elite Auto House, Andheri (East) Mumbai 400093
- 3. Stevens, ABC for Windows 98, BPB Publications
- 4. Tom Stieldon (1997), Widows 98 Made Easy, IMG Hillco, New Delhi

Suggested readings

1. Computer Fundamentals (2015), Salaria RS, Jain Book Agency, New Delhi

- 2. Computer fundamentals and Internet basics (2015), Rohit Khurana, Jain Book Agency, New Delhi
- 3. Hand book of Computer Science & IT (2013), Surbhi Mitra, Arihant publishers, Hyderabad.

NAME OF DEPARTMENT

EXTENSION EDUCATION COMMUNICATION MANAGEMENT

Course Number	EECM 211
Title	Women in Agriculture
Credit Hours	3(2+1)
General Objective	This course motivates the students to understand the status of women specifically in agriculture and thereby instigates them to find out ways and means to tackle the problems of women in agriculture, different programmes, policies, institutions and agripreneurship
Specific Objectives	 Theory By the end of the course, the students will be able to understand the status of women in agriculture and identify the factors associated with the poverty of women and measures to reduce poverty. They can comprehend the meaning of family action of agriculture and

- ii. They can comprehend the meaning of feminization of agriculture and gender issues and meaning of empowerment and the government programmes for women.
- iii. They can recognize the occupational health hazards and drudgery of women in agriculture and the preventive measures. They can understand the technological needs of women in agriculture and strategies of transfer of technology to fill the gaps.

Practical

i. By the end of the course the students will get exposure to the role of women in agriculture, get familiarized with the women friendly tools and devices, agripreneurship & farm women training.

Theory Lecture outline

- 1. Evolution of agriculture in India: Introduction, evolution of agriculture
- 2. General agricultural production activities: Introduction, meaning, concepts
- 3. Agricultural and allied sectors in rural India: Introduction, meaning, concepts
- 4. Role of women in agricultural sector: Introduction, participation, role of women
- 5. Role of women in allied sectors: Introduction,, Participation, role of women

- 6. Socio economic status of farm women: Concept & meaning, measures for socio-economic development
- 7. Health & nutrition status of women in agriculture: Introduction, Major causes for poor health and nutritional status, Effects of poor health and nutritional status
- 8. Women & Poverty: Meaning ,causes and reasons
- 9. Feminization of Agriculture Issues: Gender segregated and segmented labor force, Flexible labor force, Wages and benefits, Training and skills, women in small and marginal farms, women as independent farmers, feminization and empowerment, data gaps in coverage on women's labor, constraints
- 10. Categorisation of women in agriculture: Introduction, Characteristics and categorization of women in agriculture
- 11. Women in Organized & Unorganized sectors: women in the work force, women in unorganized sector, contribution and composition in economy, occupational profile of unorganized labour, need for social security for women in unorganized sector
- 12. Occupational Health Hazards: Occupational health hazards & women, workplace hazards to women's reproductive health, causes of health hazards, remedial measures
- 13. Types of Occupational Health Hazards: Activity specific, casual factors
- 14. Pesticides related health hazards and preventive measures
- 15. Women and drudgery: Introduction, indicators of drudgery, drudgery reducing tools and implements
- Technological needs of farm women: Identification of technological needs -life cycle approach, knowledge empowerment technologies, drudgery reduction, value addition technologies, gainful and additional employment technologies,
- 17. Income generation technologies: Introduction and types
- 18. Women friendly tools and implements: Types of tools and implements
- Gender issues in agriculture and allied sectors: Gender issues in agriculture, livestock management, forestry and fishing, gender & ICT and Media, access to resources or ownership of assets, Household Headship, Migration
- 20. Government programmes for women: District rural development agency (DRDA), Schemes of the ministry of women and child development: Swa-Shakti,Swayamsiddha,Swawlamban Programme,Support to Training and Employment Program, Institutional services, Balika mandals, Girl child protection scheme, Rashtriya Mahila Kosh (RMK), Swarnajayanthi Gram Swarozgar Yojana(SGSY)
- 21. Institutions for women in agriculture: Agricultural Technology Management Agency (ATMA), Directorate of Research on Women in Agriculture (DRWA)
- 22. Empowerment of Women :Concept & Indicators
- 23. Empowerment of women: Dimensions & Ways
- 24. Agripreneurship and training to farmwomen.: Meaning, concepts of Agripreneurship
- 25. Government organizations for promoting entrepreneurship: MANAGE, NISIET, SISI, NIRD
- 26. Non-Government organizations for promoting entrepreneurship: ALEAP

- 27. Programmes and schemes for promoting enterprises : Farm based
- 28. Programmes and schemes for promoting enterprises :Nonfarm based
- 29. Programmes and schemes for promoting enterprises : Trade related.
- Strategies for Transfer of Technologies: Technology transfer, types of technology, Nature of technology, Salient features in development of rural technologies, Strategies for transfer of technologies
- 31. National Commission For Women: A brief history, Mandate of the and constitution of the commission, Publications
- 32. National Policy for Women in Agriculture: Mission, Background, Objectives

- 1. Field visit to observe the role of women in agriculture
- 2. Field visit to observe the role of women in agriculture
- 3. Field visit to observe the role of women in agriculture
- 4. Field visit to observe the role of women in agriculture
- 5. Visit to farm machinery unit to observe women friendly tools and devices
- 6. Visit to farm machinery unitto observe women friendly tools and devices
- 7. Visit to an agripreneurship unit
- 8. Visit to an agripreneurship unit
- 9. Visit to a farm women training institution
- 10. Visit to a farm women training institution
- 11. Collection of success story
- 12. Collection of success story
- 13. Presentation of success story
- 14. Presentation of success story
- 15. Practical examination
- 16. 16. Practical examination

References

- 1. Kiran, S. and Vasantha, R. (2012). Extension Education- New Horizons. Kalyani Publications.
- 2. Nayak sarojini and Nair Jeevan. Women's Empowerment in India. Pointer publishers.
- 3. Gupta Debabrata Das. (2008). Extension Education- core contents and emerging Areas. Agrobios.
- Benerji Anitha and Sen Raj Kumar. (2000). Women and Economic Development. Deep & Deep publications Pvt. Ltd
- 5. Prasad Kiran. (2004). Communication and Empowerment of Women: strategies and policy insights from India. The Women Press. Delhi.
- 6. Ray, G.L. (1991). Extension Communication and Management. Kalyani publications.

Title

Extension Training Management

Credit Hours 3(1+2)

General Objective This course enables the students to understand the different training concepts, training types, analyze the training needs of an organization, assess, design and implement various methods, techniques and evaluate the training

Specific Objectives Theory

- i. By the end of the course, the student will be able to understand the meaning of training and types of training
- ii. The students get acquaint with designing & conducting training, training methods & training evaluation.

Practical

i. By the end of the course the students will be able to acquire the skills on different training methods to be used in training .

Theory Lecture Outlines

- 1. Training: Meaning, Definition, Need and importance, Identification of training need
- Types of training: Extension trainings: Institutional training, Non- institutional training, Comprehensive training, Organization trainings;Pre-Service training,In-service training: Induction or orientation training, Foundation Training, On-the-Job training, Promotional training, Refresher training
- 3. Training process: Phases of training process; Pre-training, Training, Post training
- 4. Training Phases and its management: Need Assessment, Training objectives, meaning and definition, Types of objectives: General, Specific; Importance of training objectives, Components, Task, Condition, Standard, Important, considerations, formulation of training objectives, Accurate action verbs, Method of writing
- 5. Qualities of a good trainer- communication skills, Questioning, Handling Difficult Situations, training skills, motivational skills, facilitation skills and technical skills
- 6. Adult learning: Characteristics of adult learner, Difference between Pedagogy and Andragogy
- Facilitation skills in training: Facilitation role of trainer, Facilitator meaning and definition, Factors of facilitation, Trainer like qualities
- 8. Problem and prospects of training.
- 9. Steps in module designing: Introduction, Role of Training, Steps,Need assessment, Framing objectives
- 10. Steps in module designing (contd): Planning overall schedule of training, Planning

detailed training sessions, Managing, training, Evaluation of training

- 11. Training methods: Interactive lecture, Interactive demonstration, Field trip, Group discussion
- 12. Training methods: Case study, Role play, T- group training, ICT, Folk media
- 13. Training evaluation: Meaning of evaluation, Areas of evaluation, Objectives, Principle Steps and indicators of training evaluation.
- 14. Training evaluation: Measuring reaction, learning, behaviour and result, Tools of evaluation, Pre test /Post test, Opinion/attitude questionnaire, Trainer observation, Trainer/trainee group evaluation session, Training practice session, Follow -up evaluation
- 15. Introduction to HRD: Need, Concept, Outcomes, Functions, Goal of HRD system, HRD Approaches
- 16. Important training institutions in India: MANAGE, NAARM, EEI'S, NIRD, MCRHRD

Practical Outlines

- 1. Visit to state level training institute
- 2. Visit to state level training institute
- 3. Visit to vocational training institute
- 4. Visit to vocational training institute
- 5. Hands-on-experience with need analysis and writing training objectives
- 6. Hands on experience with need analysis and writing training objectives
- 7. Hands-on-experience on training methods
- 8. Hands-on-experience on training methods
- 9. Hands-on-experience on training methods
- 10. Hands-on-experience on training methods
- 11. Hands-on-experience on training methods
- 12. Hands-on-experience on training methods
- 13. Familiarization with monitoring tools of training
- 14. Familiarization with evaluation tools of training
- 15. Familiarization with offline training module
- 16. Familiarization with online training module
- 17. Preparation of training module
- 18. Preparation of training module
- 19. Designing of training programme
- 20. Designing of training programme
- 21. Conducting of training programme
- 22. Conducting of training programme
- 23. Evaluation of training programme
- 24. Evaluation of training programme
- 25. Analysis of HRD programmes of academic institutions
- 26. Analysis of HRD programmes of corporate institutions

- 27. Interaction with HR D professionals
- 28. Interaction with HR D professionals
- 29. Presentation of reports
- 30. Presentation of reports
- 31. Final practical examination
- 32. Final practical examination

References

- 1. Gupta, C.B. (2001). Human Resource Management. Sultan Chand and Sons.
- 2. Dahama, O.P. and Bhatnagar, O.P. (2003). Education and Communication for Development. Oxford and IBH Publishing Co. Pvt. Ltd.
- 3. Lynton, R.P. and Pareek, V. (2008). Training for Development. Vistaar Publications.
- 4. Narwani, G.S. (2002). Training for Rural Development. Rawat Publication.
- 5. Saxena, J.P. and Kakkar, A.T. (2000). Training and Development

Course Number	EECM 311
Title	Project Management
Credit Hours	2(1+1)
General Objective	This course facilitates the students to understand the different phases involved in project management: from the procedure of writing project proposal to review of the project.
Specific Objectives	 Theory i. By the end of the course, the student will be able to understand the meaning of project management, project proposal, concept note, project designing and project planning. ii. The students get acquaint with market survey, market and demand analysis, technical analysis, financial analysis and environmental impact analysis.
	Practical i. By the end of the course the students will be able to acquire the skills to write project proposal, prepare budget and cash flow statement, compute break –even point etc., and also the skills to compute net working techniques.
Theory Lecture Outlines	

Theory Lecture Outlines

- 1. Overview of project management : Background, meaning of project, characteristics of project, meaning of Project Management and types of projects
- 2. Project management: Elements of management
- 3. Project proposal: Meaning, project designing: meaning and principles
- 4. Concept note: Meaning and steps in preparation
- Project initiation: Generation of ideas, monitoring of environment, appraisal, Screening of ideas and project rating index
- Resource allocation framework: Introduction, key criteria, investment strategies, Portfolio planning tools, strategic position and action evaluation (SPACE), interface between strategic planning and capital budgeting
- 7. Market and demand analysis: Market and demand analysis, situational analysis and specification of objectives, collection of secondary information and evaluation of secondary information
- 8. Steps in market and demand analysis: Market survey, steps in a sample survey of the market, demand forecasting, market planning
- 9. Environmental appraisal of projects: Concept, types and dimensions of a project, stress on environment, environmental resources / values
- 10. Environmental impact analysis: Meaning and scope , objectives, methodology for conducting a study, major issues, impact assessment methodologies
- 11. Technical analysis: Meaning, material inputs and utilities, manufacturing process / technology, product mix etc.,
- 12. Financial analysis: cost of project, meaning of financing, estimates of sales and production working capital requirement and its financing
- 13. Financial analysis : Profitability projections, break even point, projected cash flow statements, projected balance sheets
- 14. Budgeting: Meaning, process, types, budget control, cost-benefit analysis
- 15. Terminology of networks: net work preparation, uses of networks, terms used in networks
- 16. Project management techniques: PERT, CPM, ASBC and Gantt chart

- 1. Visit to technology generation project
- 2. Visit to technology generation project
- 3. Visit to transfer of technology project
- 4. Visit to transfer of technology project
- 5. Collection and screening of case studies on project management and report writing
- 6.Collection and screening of case studies on project management and report writing
- 7. Writing project proposal
- 8. Writing project proposal

- 9. Presentation of project proposals
- 10. Visit to funding agency
- 11. Visit to funding agency
- 12. Working on Project management techniques: PERT, CPM, WBS
- 13. Working on Project management techniques: PERT, CPM, WBS
- 14. Working on Project management techniques: PERT, CPM, WBS
- 15. Working on Project management techniques: PERT, CPM, WBS
- 16. Practical examination

References:

- 1. Jr. Samuel J. Mantel., Meredith jack r., Shafer Scott M., Sutton Margaret M. and Gopalan M.R. (2006). Project Management- core Text book. Wiley India (p) Ltd.
- 2. Adhikary M.M., Sarkar A., Acharya S.K. and Basu D. (2006). Partipatory planning and Project management in Extension Sciences. Agrotech publishing academy.
- 3. Baars Wouter . (2006). Project Management Handbook.
- 4. D. Dipak and Basavaprabha. (2010). A Handbook of Extension Education. Agrobios (India).
- 5. Sethi Nishi., Kaushik Sushma., Rani Seema and Goyal Ramesh K. (2009). Extension and Communication Management. Agrotech publishing academy.
- 6. Newton paul. (2015). principles of project management-project skills.
- 7. Khanka, S.S. (1999). Entrepreneurial Development. S. Chand and company Ltd.

Course Number	EECM 321
Title	Information and Communication Technology
Credit Hours	3(1+2)
General Objective	This course facilitates the students to understand the importance and scope, methods, means and tools of information technology.
Specific Objectives	 Theory By the end of the course, the student will be able to understand the need and importance of Instructional technology The students get acquaint with audio visual aids, conventional communication technologies, IT tools IT enabled services and social networking.

Practical

By the end of the course the students will be able to acquire the skills to

- i. Prepare audio visual aids
- ii. Use conventional communication technologies
- iii. Handle the IT tools and different software
- iv. Browse social networking websites

Theory Lecture outlines:

- 1. Information Technology Meaning, importance and Scope
- 2. Communication Process, Models, Barriers and Types of Communication
- 3. Conventional and New media technologies Classification and Types
- Conventional Communication technologies Audio Visual Media, classification, advantages and disadvantages
- Conventional Communication technologies Contact methods Individual, Group and Mass contact methods, classification, advantages and disadvantages
- Conventional Communication technologies Folk Media, Classification, Advantages and Disadvantages, Difference between Traditional and Modern media
- IT Devices: CD ROM, DVD, Desktop computers, Laptops, Tablets, LCD Projector, Printers and Electronic media – Satellite Radio and Television, Internet, Intranet
- IT tools Synchronous and Asynchronous Informative, Constructive, Communicative, Collaborative
- 9. Informative and Communicative tools Internet, Intranet, Wikis, Emails, SMS etc
- 10. Constructive tools Word processing, Power point, Photoshop, Audio video recording and editing softwares
- 11. Collaborative tools Discussions and online forums etc.
- 12. Networking LAN, WAN, Social networking Facebook, Twitter
- Social networking tools Blogs, Websites, Wikipedia, Facebook, Twitter, You tube, Instagram, Googl, Flipped classrooms etc.
- IT enabled services Call centre, Helpdesks, Data warehouse/ Knowledge management and archiving, Transcription centres, GIS mapping, Customer support services and Electronic distribution
- 15. IT enabled services and their impact on the society
- 16. Criteria for selection and evaluation of ICT tools Conventional and New media

Practical Outlines

- 1. Understanding the communication Process
- 2. Orientation to types of communication
- 3. Orientation to Conventional communication technologies Audio

- 4. Orientation to Conventional communication technologies Visual Posters
- 5. Orientation to Conventional communication technologies Visual -charts
- 6. Orientation to Conventional communication technologies Visual Flash cards
- 7. Orientation to Conventional communication technologies Visual -Flannel graphs
- Orientation to Conventional communication technologies Audio Visual Talking doll, Drama and Video
- Orientation to Conventional communication technologies Methods of contact individual, Group and Mass contact methods
- Orientation to Conventional communication technologies Methods of contact individual contact – Personal interview
- Orientation to Conventional communication technologies Methods of contact Group contact Demonstration, Debate and Symposium
- 12. Orientation to Conventional communication technologies Methods of contact –Mass contact Puppet show and Drama on social connected topics
- 13. Handling of Conventional communication devices Projectors
- 14. Handling of Conventional communication devices -Computers
- 15. Orientation to the IT tools Informative Internet, Intranet, Wikis etc.
- 16. Browsing through the internet on a selected topic through wikipedia
- 17. Orientation to the IT tools Constructive Word processing, Power point
- 18. Prepare a Word document on the selected topic
- 19. Prepare a Power point presentation on a selected topic
- 20. Orientation to the IT tools Collaborative tools Discussions and online forums etc.
- 21. Browsing through different blogs on a selective topic
- 22. Browsing through different Flipped classroom on a selective topic
- 23. Orientation to the IT tools Communicative Emails, SMS etc.
- 24. Open a new Email account and send information collected from the former excercises
- 25. Orientation to social networking sites Open a Facebook account to use for social awareness campaign
- 26. Presentation of the collected information from the Internet
- 27. Presentation of the collected information from the Internet
- 28. Presentation for the opening of Email account and present the information collected
- 29. Presentation for the opening of Email account and present the information collected
- 30. Presentation of the Power point presentation on selected topic
- 31. Presentation of the Power point presentation on selected topic
- 32. Practical examination

References:

- 1. Dubey, V.K. (2008). Extension Education and Communication. New age international (P) Ltd.
- 2. Vanangamudi, K., Venkatachala, R., Ilamurugu, k., Djanaguiraman, M. and Sridevy, S. (2010).

E-learning : An experiences. Agrobios(India).

- Prasad Kiran. (2004). Information and communication Technology-Recasting Development. B.R. Publishing corporation.
- 4. Celebic Gorana. and Rendulic Dario Ilija. (2011). ITdesk.info project of computer e-education with open access. Open Society for Idea Exchange (ODRAZI), Zagreb.
- 5. Silberschatz Abraham., Galvin Peter Baer. and Gagne Greg. Operating system concepts. Ninth edition. John wiley & sons. Inc.
- Tanenbaum Andrew, S. (2009). Modern operating systems. Third edition. Pearson Education, Inc.

Course Number	EECM 322
Title	Diffusion and adoption of Homestead Technologies
Credit Hours	3 (2+1)
General Objective	This course facilitates the students to understand the homestead innovations spread among the women in the society by getting into the insights of diffusion concept and adoption process, and innovation decision process, adopter categories and their characteristics and factors influencing adoption.
Specific Objectives	 Theory By the end of the course, the students will be able to understand the meaning and process of diffusion & adoption, different concepts related to diffusion & adoption process. The students will also gain knowledge on different homestead technologies
	Practical

 By the end of the course the students will be able to collect information on different homestead technologies and exposed to diffusion & adoption process in villages.

Theory Lecture outlines

- Diffusion: Concepts of diffusion, innovation, innovativeness, reinvention, Communication channels and social system
- 2. Diffusion: Social change, social structure, adoption, rate of adoption, localite, cosmopolite, homophily, heterophily, consequences, discontinuance, opinion leadership, change agent, norms
- 3. Elements of Diffusion process: Introduction, elements of diffusion process: innovation,

communication channels, time.

- 4. Diffusion process: social system: optional, collective, authority, contingent
- 5. Innovation Diffusion Process: Concept, model of ID process
- 6. Types of innovation-decision process
- 7. Consequences of innovations: concepts
- 8. Adoption: Meaning, adoption process, five stage process
- 9. Factors influencing adoption : Personal, situational, social
- Consequences of adoption: Meaning, desirable/undesirable, functional versus dysfunctional, direct versus indirect, anticipated versus unanticipated, manifest versus latent
- 11.Constraints in adoption of technologies
- 12. Innovation diffusion process: Adoption, confirmation, rejection, dissonance
- 13. Innovation Decision Process: Rate of adoption, over adoption, innovativeness
- 14. Discontinuance: Replacement, disenchantment, forced discontinuance, over adoption,
- 15. Attributes of an Innovation and their influence in transfer of technology: Meaning of attributes, relative advantage
- 16. Attributes of an innovation: Complexity, trialability, predictability, compatibility, observability
- 17. Adopter categories: Concept and types
- 18. Homestead Technologies: Meaning, women and technologies
- 19. Homestead Technologies: Home technologies, farm technologies
- 20. Characteristics of innovation with special reference to homestead technologies: Affirmative, comprehensive, drudgery free
- 21. Process of homestead technology development: Technology research, generation, technology testing, adaptation, integration
- 22. Channels of communication for homestead technology: Technology research, generation, testing, adaptation, integration
- 23. Diffusion network: Homophily, Heterophilly, Localite versus Cosmopolite Channels
- 24. Social Change: Concept, theories, dimensions
- 25. Social Change: Factors associated with the acceptance and resistance of change
- 26. Change Agent: Sequence of change -agent roles, factors in change agent success
- 27. Agencies of change: Concept, role in diffusing technologies
- Opinion Leadership: Meaning, Hypodermic Needle Model, The Two Step Flow Model, Monomorphic leaders, Polymorphic leaders
- 29. Opinion Leadership: Selection of opinion leaders, sociometric, informants ratings, self- designating technique, observations
- 30. Change Process: Factors affecting change
- 31. Different homestead technologies with special reference to Home Science

- 1. Collection of Homestead Technologies
- 2. Collection of Homestead Technologies
- 3. Adoption in locality- Observation
- 4. Adoption in locality- Observation
- 5. Adoption in locality- Observation
- 6.Visit to different entrepreneurs adopted home stead technologies for business enterprise
- 7.Visit to different entrepreneurs adopted home stead technologies for business enterprise
- 8. Visit to different successful SHGs
- 9. Visit to different successful SHGs
- 10.Categories of adopters among SHG members
- 11.Categories of adopters among SHG members
- 12. Analysis and presentation of report
- 13.Identification of change agents in a locality
- 14.Identification of change agents in a locality
- 15. Analysis and presentation of report
- 16.Practical examination

References :

- 1. Rogers, M. (2010) Diffusion of innovations. Third Edition. Library of Congress Cataloging in Publication Data.
- 2. Gupta Debabrata das. (2008). Extension Education- Core contents and emerging Areas. Agrobios (India).
- 3. De Dipak and Basavaprabha. (2010). A Handbook of Extension Education. Agrobios (India).
- 4. Dubey, V.K. and Bishnoi Indira. Extension Education and communication. New Age Publications.
- 5. Supe, S.V. (2011). Integrated Extension Education. Agrotech publishing Academy.
- Khan, P.M. and Somani, L.L. (2009). Fundamentals of Extension Education (Incorporating ICAR Recommended Syllabus). Agrotech publishing Academy.

Title	Elementary Statistics
Credit Hour	s 3 (2+1)
General Obj	jective : To impart elementary statistical methods/ tools for analyzing data in Community Science
Specific Obj	ectives :
	Theory
	By the end of the course, the student will be able to
	I. Know the names of different statistical tools employed for
	analyzing the data associated with community science.
	2. Understand different formulae of statistical tools /method and
	their merits and demerits and purpose of using them.
	3. Gain knowledge of using the statistical tools /methods in different
	situations for different hypotheses of data.
	Practical
	By the end of the Course, the student will be able to
	1. Learn the practice of computing measures of central tendency and dispersion given the relevant data.
	2. Learn the practice of computing the properties and fitting of
	Binomial, Poisson & Normal distributions given the relevant data
	3. Learn the practice of computing the testing of hypotheses using different tests like t-tests, chi-square test given the relevant data.
	4. Learn the practice of computing correlation, regression , one-way analysis of variance and drawing simple random sampling given the relevant data
Theory Lect	ure Outlines
1. Intro of da	duction to statistics; definitions, functions, uses and limitations, Classification and tabulation ta
2. Qual	itative and quantitative classification, discrete and continuous variables,

- 3. Frequency tables, grouped and ungrouped data.
- 4. Diagrammatic representation of data; One, Two and Three dimensional diagrams with applications.
- 5. Graphical representation of data; Histogram, frequency polygon, frequency curve, ogives.
- 6. Measures of central tendency; Introduction to basic concepts of logarithms, A.M. merits and demerits and uses
- 7. Median. Mode with merits, demerits and uses
- 8. G.M.and H.M. with merits and demerits, Relationship between AM, GM and HM,
- 9. Measures of dispersion; Range, Quartile deviation, Inter Quartile range
- 10. Mean deviation from AM, Median and Mode
- 11. Variance, Standard deviation, Coefficient of variation.
- 12. Moments; Raw moments, Central moments for grouped and ungrouped data, relationship between raw moments and central moments.
- 13. Measures of Skewness and Kurtosis;
- 14. Definitions of symmetrical distribution, Skewness and Kurtosis,
- 15. Relationship between mean, median and mode and between quartiles for symmetrical and skewed distributions.
- 16. Probability theory; Definition of probability, Definition of random experiment sample space, events, mutually exclusive and equally likely events and independent events
- 17. Addition and multiplication theorem of probability Simple problems based on probability,
- 18. Conditional events and independent events, Simple problems based on probability
- 19. Simple problems on probability based on permutations and combinations,

- 20. Correlation: definition of correlation its types, scatter diagrams, Karl Pearson's formula of correlation coefficients, Testing of significance of correlation coefficient,
- 21. Definition of regression, regression equation of Y on X
- 22. Regression equation of X on Y, Relationship between correlation coefficient and regression coefficients.
- 23. Problems based on correlation and regression.
- 24. Tests of significance; basic definitions, hypothesis, null and alternative hypothesis, tests statistic, testing of hypothesis,
- 25. One sample t-test and two sample fisher's t-test.
- 26. Chi-square test of goodness of fit and Chi-square test of independence of attributes.
- 27. Discrete and continuous probability distributions; definition of random variable, discrete and continuous random variables, probability distribution of random variable,
- 28. Binomial distribution & Poisson distribution
- 29. Normal distribution and applications.
- 30. Analysis of variance; definition of analysis of variance, assignable and Nonassignable factors, Analysis of one way classified data.
- 31.Introduction to sampling methods; definition of population, random sample, sampling, versus complete enumeration,
- 32.Use of random number table for selecting a simple random sample, simple random sampling with and without replacements.

- 1. Diagrammatic representation of data
- 2. Graphic representation of data
- 3. Measures of central tendency (Ungrouped data) with calculation of quartiles,
- 4. Deciles and percentiles, A.M.(Ungrouped &Grouped data)
- 5. Median& Mode (Ungrouped & Grouped data)
- 6. Range, Quartile deviation (Ungrouped & Grouped data)
- 7. Mean deviation from A.M., Median & Mode (Ungrouped & Grouped data)
- 8. Variance, Standard deviation, Coefficient of variation (Ungrouped &Grouped data)
- 9. Moments, measures of skewness and kurtosis (Ungrouped data)
- 10. Moments, measures of skewness and kurtosis (Grouped data)
- 11. Correlation, Regression equation of Y on X
- 12. Regression equation of X on Y,
- 13. One sample t-test, Two sample Fisher's t-test,
- 14. Chi-square test of goodness of fit, Chi-square test of independence of attributes
- 15. Analysis of variance of one way classification
- 16. Selection of simple random sample

References

Title

Elhance, D. N.	Fundamentals of Statistics
G.Nageswara Rao	Statistics for Agricultural Sciences
Kapoor and Saxena	Mathematical Statistics
Singh and Verma	Agricultural Statistics
Hall and Knight	Higher Algebra

Course Number CSBC 212

Fundamentals of Food Microbiology

Credit H	urs 3 (2+1)
General Objectiv	• To impart knowledge of microorganisms associated with food spoilage and food poisoning and understand the growth and control of microorganisms.
Specific	Theory
Specific Objectiv Theory 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28.	Theory By the end of the course the students will be able to i. Know names, sources, and growth of microorganisms associated with food ii. Understand methods of control of microorganisms by different food processing techniques. iii. Gain knowledge of spoilage caused by microorganisms and the toxic and poisonous affect on human body. Practical By the end of the course, the student will be able to i. Develop skill in using microscope, preparation of media, culturing of microorganism and preparation of slides. ii. Isolate and identify different microorganisms and count the colonies in petridish. iii. Assess the extent of spoilage and compare with safety levels in different food groups. ecture outlines troduction and brief history of food microbiology [ajor groups of microorganisms associated with food-Mold ources of microorganisms associated with food-Mold ources of microorganisms associated with food-Mold ources of microorganisms associated with foodsIntrinsic factors actors effecting growth and survival of microorganisms in foodsExtrinsic factors anysical methods to control microorganisms. hemical methods to control microorganisms. hemical methods based on mait. ermented foods based on grains. ermented foods based on mait. ermented foods based on fruits and Vegetables. ermented foods based on grains. poilage organisms of mean. poilage organisms of food preservation. poilage organisms of fore the students. poilage organisms of fruits on the optical and other Asian countries. poilage organisms of mean. poilage organisms of fruits and Vegetables. ermented foods ba
28. 20	licrobial toxins.
29. 30.	apid methods for detection of microorganisms.
31.	re final examination
Practical	utlines General laboratory practices and equipment used in food microbiology laboratory Methods of Sterilization. Sterilization of glassware by dry bosting and sterilization of
<i>L</i>	victious of sternization- sternization of glassware by thy heating and sternization of

nutrient broth by moist heating

- 3 Aseptic methods- Aseptic handling of glassware and aseptic transfer of a liquid culture with an inoculation loop
- 4 Microscopic examination of bacteria
- 5 Microscopic examination of yeast
- 6 Microscopic examination of molds
- 7 Preparation of media -Agar slants and agar plates
- 8 Isolation of microorganisms-Streak plate method
- 9 Isolation of microorganisms- Spread plate method
- 10 Isolation of microorganisms- Pour plate method
- 11 Purification and maintenance of microorganisms
- 12 Detection of fecal coli form
- 13 Counting of microorganisms-Total bacterial count (TBC) and Total Mold Count(TMC)
- 14 MPN of coli forms –Counting bacteria in water using the most probable number technique
- 15 Microbiological examination of different foods- milk, grains, fruits and vegetables
- 16 Practical Examination.

References

- 1. Frazier J & Westhoff DC. 1988. Food Microbiology. 4th Ed. McGraw Hill.
- 2. Pelczar, et al. 1996. Microbiology, 5th edn
- 3. Banawart GJ. 1989. Basic Food Microbiology. 2nd Ed. AVI Publ.
- 4. Garbutt J. 1997. Essentials of Food Microbiology. Arnold Heinemann.
- 5. Stanier I. and Wheels and Painter. 1992. General Microbiology. 5th ed.
- 6. Kapoor, T. and Yadav. 1991. An Introduction to Microbiology.

Course Number CSBC 221

Title

Communication Skills and Personality Development

Credit Hours	3(2+1)
General Objective	To Help the Students in Polishing and refining their Communication Skills
Specific Objectives	Theory By the end of the course the students will be able to i. Understand the theoretical aspects of Communicatio
	Skills.

Practical

By the end of the course, the student will be able to Use their Communication Skills in practical life for attainin success.

Theory Lecture outline

- 1. Communication Definition, Types
- 2. Communication Skills Discussion on their importance
- 3. Verbal & Non- Verbal Communication Detailed explanation
- 4. Listening Exercises on listening comprehension
- 5. Note Taking Situations where it is used
- 6. Writing Skills Letter, paragraph & precis writing
- 7. Oral Presentation Branches of oral Presentation
- 8. Kinesics Study of Body Language
- 9. Eye Contact, Posture
- 10. Audience preparation, Audio- Visual Aids
- 11. Field Diary & Lab Record Discussion on different Aspects

- 12. Indexing on Foot Note Their Importance in Research paper
- 13. Bibliography -How to write a Bibliography
- 14. Reading Types of reading
- 15. Skimming, Scanning
- 16. Reading Aloud, Silent Reading
- 17. Precis Writing Rules of writing a good precis
- 18. Summarizing Factors that go into the making of a good summary
- 19. Uses of Writing a summary
- 20. Abstracting Discussion in detail
- 21. How to write an Abstract of a book
- 22. Public Speaking How to prepare a speech
- 23. How to deliver a successful Speech
- 24. Group Discussion Purpose & definition
- 25. How to emerge successful in a group discussion
- 26. Importance of Technology in Communication
- 27. Sources of Electronic Communication
- 28. A brief discussion on the use of Internet, E-mail & Fax
- 29. How to arrange Video Conferencing
- 30. Personality Meaning & Definition
- 31. Development of Personality Self Concept, Self Esteem
- 32. Importance of Formal & Informal Dressing

- 1. Exercises in Listening Comprehension
- 2. Note Taking Its Importance in Professional Life
- 3. Oral Presentation Factors that make our Oral Presentation Effective
- 4. Mock Oral Presentation by Students
- 5. How to use Indexing & Foot note in a Dissertation
- 6. Preparation of Bibliography on different Topics
- 7. Exercises on Reading Comprehension
- 8. Preparing students in writing a technical Article
- 9. Introduction to Precis Writing, Summarizing & Abstracting
- 10. Questionnaire How to Develop it
- 11. Importance of questionnaire in Research Writing
- 12. Ways of Collecting Data
- 13. How to Select a sample while writing a Research paper
- 14. Types of Report Writing
- 15. Case Study Its Importance for an Individual suffering with Personality Disorders
- 16. Final Practical Exam

References

- 1. Business Correspondence & Report Writing by R.S Sharma & Krishna Mohan, Tata McGraw-Hill, Publishing Company Pvt. Ltd. New Delhi
- 2. Developing Communication Skills by Meera Banerjee & Krishna Mohan, Orient Longman, Publishing Company, Pvt. Ltd, New Delhi
- **3.** A Text Book of Foundation Course in English, Edited by Pushpa Rama Krishna and Published by Dr. B.R.Ambedkar Open University, Hyderabad.

Course Number CSBC 311

Title Economics and Marketing

Credit Hours 3(2+1)

General Objective To obtain a basic knowledge about the various basics of economics and marketing

Specific	Theor	y
Objectives	By the	end of the course the students will be able to
	I.	Gaining basic knowledge of marketing, types of markets - difference
		between marketing, selling and merchandising, process of
		management, marketing organizational structure, marketing concepts,
		marketing process
	II.	Understand the buyer behavior
	III.	Learn about market segmentation and marketing mix
	IV.	Know all about the product – product features, components of a product personality, product levels, product positioning and pricing strategies
	V.	Study about wholesalers, retailers, channels of distribution
	VI.	Know the importance of branding, advertising, packaging
	Practi	cal
	By the	end of the course, the student will be able to
	I.	Obtain basic knowledge of marketing, types of markets for different

- I. Obtain basic knowledge of marketing, types of markets for different types of products and marketing process
- II. Understand the buyer behaviour for various types of goods and services
- III. Learn about market surveys
- IV. Know about the product product features, components of a product personality, product levels, product positioning and pricing strategies

Theory Lecture outline

- 1. Terms and definitions in Economics;
- 2. Basic Concepts of Economics. Goods and services.
- 3. Basic Concepts of Economics. Human wants Characteristics and Classification.
- 4. Consumption Meaning and importance in Economics
- 5. Nature of Economic Laws, Basic equilibrium, utility, elasticity, competition.
- 6. Demand and supply meaning and laws
- 7. Theory of Consumer Behavior: Utility analysis-cardinal and ordinal approaches.
- 8. Consumer surplus and Indifference curve analysis
- 9. Consumer equilibrium, income, price and substitution effects.
- 10. Factors of production and factors affecting production
- 11. Gross Domestic Product (GDP) Factors affecting GDP.
- 12. Role of industry sector in National GDP.
- 13. Marketing- Meaning and Definition,
- 14. Need for marketing,
- 15. Role of marketing,
- 16. Marketing process,
- 17. Marketing functions,
- 18. Classification of markets,
- 19. Channels of distribution types, selection of distribution channel, Wholesalers, Retailing,
- 20. Brands and branding brand equity, extension, brand management
- 21. Advertising importance, classification, advertising campaign
- 22. Pricing and pricing policies Price spread,
- 23. Marketing efficiency,
- 24. Integration,
- 25. Constraints in marketing of agricultural and other small scale industrial produce,
- 26. Market intelligence and marketing research
- 27. Bank and banking norms
- 28. Insurance meaning, need and types,
- 29. SWOT analysis meaning and importance,
- 30. Crisis management need and methods.

- 31. Techno-economic parameters for preparation of projects
- 32. Basic guidelines for preparation of project report.

- 1. Visit to different markets for project identification.
- 2. Techno-economic parameters for preparation of project Project identification through market survey
- 3. Techno-economic parameters for preparation of project –Identification of technical parameters
- 4. Techno-economic parameters for preparation of project Analysis of technical parameters
- 5. Techno-economic parameters for preparation of project –Identification of Economic parameters
- 6. Techno-economic parameters for preparation of project Analysis of Economic parameters
- 7. Preparation of final project
- 8. Preparation of bankable projects for various agricultural products
- 9. Preparation of bankable projects for various value added agricultural products.
- 10. Preparation of bankable projects for various small scale industrial products
- 11. Identification of marketing channel Agricultural products.
- 12. Identification of marketing channel Value added Agricultural products.
- 13. Identification of marketing channel Small scale industrial products.
- 14. Calculation of price spread Agricultural products and Value added Agricultural products
- 15. Calculation of price spread Small scale industrial products
- 16. Identification of market structure

References

- 4. Economic Theory, by Tamilnadu Textbook And Educational Services Corporation
- 5. Elementary Economic Theory, 2003, by K.K. Dewett, J.D. Verma, S.Chand (G/L) & Company Ltd
- 6. Elementary Indian Economics 2008, K.K. Dewett, J.D. Verma, S.Chand (G/L) & Company Ltd
- 7. Marketing, Economics & Banking by Dezy Kumari, Lucent Publications; Fifth edition (2015)
- 8. Mamoria C.B, 1977, Principles and Practice of Marketing in India, Kitab Mahal, Allahabad.
- 9. Kotler. P, 2010, Marketing Management-Analysis, Planning, Implementation and Control, 9th Edition, Prentice Hall, New Delhi.
- **10.** Ramaswamy V.S & Namakumari S, 2010, Marketing Management, Macmillan Publishers India, New Delhi

Course Number	CSBC 321
Title	Elementary Human Physiology
Credit Hours	3(2+1)
General Objective	• To impart knowledge on the different parts of human body from cellular to organ systems, their structure and physiology, functioning and regulation in the human body and integration and maintenance of homeostasis
Specific	Theory
Objectives	By the end of the course the students will be able to
	i. Study of the normal and regulatory mechanism of musculoskeletal, circulatory, respiratory, digestive, urinary, immune, reproductive, and endocrine organ systems
	ii. Integration of the organ systems to maintain proper internal environment
	iii. Role of the Autonomic Nervous System in regulating organ function
	iv. Understand the neural & hormonal homeostatic control mechanisms of the human body

Practical

By the end of the course, the student will be able to

- i. Identify the structure of different systems in the human body.
- ii. Analyze the blood samples for biochemical investigations related to body functioning as complete blood picture.
- iii. Assess the variations in vital functions like blood pressure, pulse rate during exercise and diseases in different conditions.

Theory Lecture outlines

- 1 Physiological process Introduction.
- 2 Structural basis of human body cells and their functions.
- 3 Structural basis of human body tissues and their functions.
- 4 Skeletal system.
- 5 Joints.
- 6 Muscular system.
- 7 Functions of brain.
- 8 Functions of spinal cord.
- 9 Nerve impulse reflex action.
- 10 Sense organs eyes, nose.
- 11 Sense organs tongue, skin, ears.
- 12 Composition and functions of blood.
- 13 Composition and functions of lymph.
- 14 Structure of heart and course of blood circulation.
- 15 Blood pressure and factors affecting blood pressure.
- 16 Pulse rate and heart sounds.
- 17 Respiratory apparatus.
- 18 Mechanism of respiration.
- 19 Respiratory rates.
- 20 Volume and transport of gases.
- 21 Physiology of kidney.
- 22 Physiology of digestion.
- 23 Digestive enzymes and their functions.
- 24 Functions of liver.
- 25 Absorption from the intestine.
- 26 The location, secretions and function of various endocrine glands pituitary, thyroid, parathyroid.
- 27 The location, secretions and function of various endocrine glands adrenal, testes, ovaries.
- 28 The location, secretions and function of various endocrine glands Panceas, Placenta, pineal gland.
- 29 Male reproductive organs and their functions.
- 30 Female reproductive organs and their functions.
- 31 Pregnancy, persecution and milk secretion.
- 32 Pre-Final Examinations.

Practical Outlines

- 1 Demonstration of animal viscera, identification of systems and organs.
- 2 Transverse section of stomach, intestine small and large.
- 3 Models of excretory and reproductive organs and their histology.
- 4 Estimation of hemoglobin using heamoglobinometer and colorimeter.

- 5 Estimation of RBC count by hemocytometer.
- 6 Estimation of WBC count by hemocytometer.
- 7 Differential counting of WBC using peripheral smear.
- 8 Estimation of PCV, ESR, micro and macro heamatocrit.
- 9 Estimation of bleeding and clotting time.
- 10 Measurement of pulse rate and blood pressure, its variation with exercise.
- 11 Testing for sensation.
- 12 Special sensors.
- 13 Measurement of respiratory quotient, inspiration, expiration.
- 14 Measurement of O_2 and CO_2 at various partial pressure in lungs.
- 15 Learning of Reproductive cycle-menstruation and estrous cycles.
- 16 Practical examination.

References

- 1. Chatterjee C.C. 1980 Human Physiology Medical Allied, Calcutta
- 2. Ganong W.L. 1995 Review of Medical Physiology Norwalk Simon & Schuster
- 3. Rahul P Phate (2013) Anatomy and Physiology and Health Education. Career Publications, Nasik.
- 4. Arthur J. Vanders. Human Physiology- The mechanisms of body function, Tata McGraw Hill Publishing Company, New Delhi.
- 5. Samson Wright. Applied Physiology. 10th edn. Revised by Keele, C.A. and Neil, B. Oxford University Press, New York

Course Number	RMCS 211	
Title	Financial Management and Consumer Education	
Credit Hours	2(2+0)	
General Objective	Applying the consumer education practices in the daily life of the consumer	
Specific Objectives	 Theory By the end of the course the students will be able to To create awareness on the importance of consumer education and manageme at individual and family levels To understand the financial levels. Banking, crediting etc by the consumer To create awareness among the consumers about their problems, right reconscibilities and food adulteration 	

Theory Lecture outlines

- 1. Family finance Concepts, importance, objectives and major aspects
- 2. Income concepts: productive income, hidden income, money income, real income, psychic income.
- 3. Family as income producing and utilizing unit, factors affecting in the use of family income
- 4. Analyzing income: income profiles
- 5. Analyzing income: methods of handling income and account keeping systems
- 6. Family budget: steps of budget making, factors influencing the budget making, advantages of budget making
- 7. Engel's law of consumption, standard of living
- 8. Credit- needs types, uses and sources
- 9. Planning for financial security of families, credit institutions
- 10. Savings and Investment- types of savings / investment
- 11. Saving institutions and its importance
- 12. Investment plans and criteria for judging family investments
- 13. Taxation- objectives, characteristics
- 14. Classification of Taxes in India
- 15. Consumer definition and role, concept of consumer and consumer economics
- 16. Market and merchandising definition
- 17. Market and merchandising importance of merchandising.
- 18. Consumer problems urban areas: unfair trade practices, adulteration, faulty weights and measures
- 19. Consumer problems in rural areas: unfair trade practices, adulteration, faulty weights and measures
- 20. Consumer problems in e- marketing
- 21. Consumer rights and responsibilities
- 22. Consumerism and its growth
- 23. History of consumer movement in the developed and developing countries
- 24. Consumer protection Act and Govt. legislation and order
- 25. NGO's for consumer protection and welfare
- 26. Standard and standardization need, importance and types of standards for various products
- 27. Standard and standardization legislative measures for regulating quality in Consumer durables
- 28. Standard and standardization legislative measures for Foods
- 29. Sources of consumer information Advertisements definition, importance, and types advertisements
- 30. Sources of consumer information Product Labels definition, importance, and types
- 31. Sources of consumer information Product packaging etc. definition, importance, and types
- 32. Consumer and the environment

References

- 1. Rice, Nickel and Tucker. (1976). Management in Family Finance. John Wiley and Sons., New York
- 2. Seetharaman P. Sethi M. (2002). Consumerism Strategies and Tactics. CBS Publishers and Distributors. New Delhi.
- 3. Verghese, M.N. Ugale, W. N. and Srinivasan, K. (1997). Home Management, New Delhi: New Age International.

Course Number	RMCS 221
Title	Housing and Space Management
Credit Hours	3(2+1)
General Objective	Gain an understanding of the basic principles of planning a house and designing life space
Specific Objectives	 Theory By the end of the course the students will be able to Recognize the family's needs in relation to housing Gain knowledge on housing issues and building services gain practical knowledge in designing space for different family needs
	 Practical By the end of the course the students will be able to <i>i.</i> To learn the basics of architectural symbols and plans ii. To learn about the efficient arrangement of space in interiors

iii. To learn to develop the house plans including furniture

Theory Lecture outlines

- 1. Housing importance, characteristics and effects of insufficient housing
- 2. Housing needs at different stages of family life cycle.
- 3. Factors to be considered in selection of family housing, selection of site,
- 4. Types of house plans floor plan, site plan, cross sectional plan, perspective plan, elevation plan and landscape plan.
- 5. Advantages and disadvantages of renting and owning a house
- 6. Economy in housing construction
- 7. Principles of house planning: orientation and aspect
- 8. Principles of house planning: privacy, grouping, roominess, prospect
- 9. Principles of house planning: flexibility, circulation, sanitation
- 10. Principles of house planning: furniture requirement and practical considerations
- 11. Space management based on functional areas Living room / Drawing room
- 12. Space management based on functional areas Bedrooms for different people
- 13. Space management based on functional areas Kitchen
- 14. Space management based on functional areas Dining
- 15. Space management based on functional areas Storage
- 16. Space management based on functional areas other areas like pooja, study etc
- 17. Space management and Interior types based on functional needs interiors for youth,
- 18. Space management and Interior types based on functional needs interiors for elderly
- 19. Space management and Interior types based on functional needs other special needs
- 20. Housing problems rural and urban housing problems in India
- 21. Housing legislation and regulation Building Act 1984, Defective Premises Act 1972, Disability Discrimination Act 1995, Environment Protection Act etc.
- 22. Housing policies government and non- government housing policies and housing schemes.
- 23. Housing finance government and non- government finance institutes.
- 24. Housing schemes government and semi- government
- 25. Housing standards sanitary facility, food preparation and refuse disposal
- 26. Housing standards space and security

- 27. Housing standards thermal environment, illumination and electricity
- 28. Housing standards structure and material, interior air quality
- 29. Housing standards water supply
- 30. Housing standards access, site and sanitary condition
- 31. Technology in housing advanced technology in housing construction
- 32. Low cost building technology, low cost building materials.

- 1. Learning and comprehending architectural symbols
- 2. Lettering design and techniques
- 3. Planning Space arrangement-Living and Dining Rooms
- 4. Planning Space arrangement -Bed and Bath rooms
- 5. Types of Kitchen-Single wall, Double wall, L-shape
- 6. Types of Kitchen -U-shape, Island
- 7. Designing of kitchen and bathroom for special needs
- 8. Planning Space saving storage solutions
- 9. Drawing of House plan for EWS and LIG
- 10. Drawing of house plan for MIG
- 11. Drawing of house plans for Rural families
- 12. Drawing a house plan indicating electrical wiring and fixtures
- 13. Drawing a house plan indicating plumbing and water supply
- 14. House plan for renovation according to needs of residents
- 15. Market survey to study the available building materials in the local market
- 16. Final Practical Examination

References

- 1. Mathur, G.C. (1993). Low Cost Housing in Developing Countries. New Delhi: Mohan Primlani, Oxford and IBH.
- 2. Tessis Agan, M.S. (1970). The House. New Delhi: Oxford and IBH
- 3. S.Renuka, Mahalakshmi V Reddy. Housing & Space Management. Indian Council Agricultural

Course Number	RMCS 222
Title	Ergonomics and Appropriate Technologies
Credit Hours	2 (1+1)
General Objective	To impart knowledge about ergonomics, care of household appliances and low cost energy saving devices
Specific Objectives	TheoryBy the end of the course, the students will be able to understandi. The tools and techniques of ergonomic evaluation and drudgery reduction.ii. Methodologies for work simplification and energy saving and management.
	Practical
	By the end of the course the students will be able to carry out i. Ergonomic evaluation of electric and non-electric tools and equipment ii. Techniques for care and maintenance of household appliances iii. Demonstration of use, care and maintenance of low cost energy saving devices
Theory I acture outli	mag

- Theory Lecture outlines
 - 1. Introduction and definition of 'Ergonomics'
 - 2. Principles of Ergonomics- Anthropometrics
 - 3. Work simplification meaning and importance, techniques
 - 4. Mundel's classes of changes
 - 5. Work, worker and workplace relationship

- 6. Ergonomic tools and techniques
- 7. Ergonomic evaluation equipment
- 8. Household drudgery- definition, Drudgery reduction
- 9. Household equipment- introduction, definition and classification
- 10. Impact of household equipment on work, worker and environment
- 11. Equipment design and its effect on body posture
- 12. Energy management: Significance, Energy costs of Home making tasks, techniques and apparatus in measuring Energy costs, management process applied to energy
- 13. Energy management efforts used in home making activities
- 14. Renewable energy saving technologies
- 15. Non renewable energy saving technologies
- 16. Ways and methods in the reduction of energy consumption in household, farm and community

- 1. Learning Anthropometric dimensions for various purposes
- 2. Ergonomic evaluation of selected task using pathway chart
- 3. Ergonomic evaluation of tools and equipment by using operation chart
- 4. Ergonomic evaluation of tools and equipment by using process chart
- 5. Use, care and maintenance of common household appliances Kitchen tools Non Electric
- 6. Use, care and maintenance of common household appliances Kitchen tools Electric
- 7. Use, care and maintenance of common household appliances minor non electric equipment
- 8. Use, care and maintenance of common household appliances minor electric equipment
- 9. Use, care and maintenance of common household appliances refrigerator, washing machine
- 10. Use, care and maintenance of common household appliances Vacuum cleaner, Oven
- 11. Demonstration, use, care and maintenance of low cost energy saving devices: Solar Dryer
- 12. Demonstration, use, care and maintenance of low cost energy saving devices: Solar cooker
- 13. Demonstration, use, care and maintenance of low cost energy saving devices: insulation box cooker
- 14. Demonstration, use, care and maintenance of low cost energy saving devices: steam cooker
- 15. Demonstration, use, care and maintenance of low cost energy saving devices: Low cost food preservation devices
- 16. Demonstration, use, care and maintenance of low cost energy saving devices: Zero energy cool chamber

References

- 1. Grandjean, E. (1981). Ergonomics of the Home. Taylor and Francis Ltd. New York.
- 2. Grandjean, E. and Kroemer, K.H.E. (1999). Fitting the Task to the Human a Text Book of Occupational Ergonomics. Taylor and Francis, New York.
- 3. Peet, I.J and Arnold, M.G. (1993). Household Equipment. John Wiley, New York.
- 4. Kroemer KHE. 2008. Fitting the Human-Introduction to Ergonomics. Taylor and Francis Ltd. New York.

Course Number	RMCS 311
Title	Residential and Commercial Space Design
Credit Hours	3(2+1)
General Objective	To enable the student to develop theoretical knowledge in designing space for family living and commercial spaces
Specific Objectives	 Theory By the end of the course the students will be able to To enable the student to develop knowledge in designing space for family living. Exposure to design and decorate residential spaces To gain managerial skills and handle space efficiently for multiple functions Study building codes, fire safety and barrier – free designs as essential

components of laying out interior space

v. Learn use of presentation boards to assist clients in visualizing the design project.

Practical

By the end of the course the students will be able to

- i. Get exposed to different types of residential buildings
- ii. Learn to put the detailed drawings of residential designs on paper
- iii. Develop skills to create a functional, ergonomic and beautiful design for clients with interior spaces.
- iv. Practice and gain experience to design residential and commercial environments that promote, sustain and inspire health and healthy
- v. To explain the sequence of procedures used in completing a design project, including conducting interviews, creating and presenting design concept.
- vi. To determine cost estimates, making purchases of products and services, supervising the work and completion of services.
- vii. Able to develop good portfolio.

Theory Lecture outlines

- 1. Residential building types and characteristics
- 2. Commercial buildings- types and design issues
- 3. Factors influencing building design
- 4. Residential Interior Design Standards living spaces
- 5. Residential Interior Design Standards service spaces
- 6. Commercial Interior Design Standards service spaces
- 7. Commercial Interior Design Standards lighting and other environmental parameters
- 8. Design Process Steps
- 9. Approaches to planning residential spaces
- 10. Approaches to planning commercial spaces
- 11. Design and space organization, analysis of different spaces of independent houses of different income groups.
- 12. Design and space organization, analysis of different spaces of independent houses of different income groups.
- 13. Design and space organization, analysis of apartments and flats.
- 14. Understanding building bye laws, regulations residential buildings.
- 15. Understanding building bye laws, regulations commercial buildings.
- 16. Specifications essential for building and service management
- 17. Selecting materials and finishes for interiors.
- 18. Cost of Estimation fittings, fixtures, furniture, lighting and materials for residential buildings and commercial buildings
- 19. Technical services required for residential and commercial buildings
- 20. Services mechanical, computer and communication system
- 21. Space needs in commercial buildings.
- 22. Design and space organization of commercial interiors for business establishments- retail stores
- 23. Design and space organization of commercial interiors for hotels/restaurants,
- 24. Design and space organization of commercial interiors for hospitals,
- 25. Design and space organization of commercial interiors for educational buildings- schools/ colleges
- 26. Design and space organization of commercial interiors for recreational centers theaters, museums, parks
- 27. Design and space organization of commercial interiors for public service buildings
- 28. Functional Designing for physically challenged in commercial and residential buildings
- 29. Indoor climate and Landscaping for commercial and residential
- 30. Tenders and work contracts
- 31. Professional issues and ethics in management of projects
- 32. Commercial window displays

Practical Outlines

- 1. Visit to residences to study space allocation and utility
- 2. Analysis of Interior Space organization

- 3. Visit to different commercial buildings and to study design concept
- 4. Evaluation of commercial buildings
- 5. Develop conceptual drawings and floor plans for various income groups.
- 6. Develop layouts of furniture, lighting, electrical and plumbing for various income groups.
- 7. Practical applications of design and space organization of apartments and flats and analysis.
- 8. Cost estimation for designing interiors of various income groups.
- 9. Designing and developing a layout for a small residential project
- 10. Evolving interior decoration details with material sample for the small residential project.
- 11. Designing and developing a layout for a residential project in coastal areas
- 12. Evolving interior decoration details with material sample for coastal areas
- 13. Presentation of the detailed work done for small residential project and coastal areas
- 14. Designing and developing a layout for a small commercial project
- 15. Evolving interior decoration details with material sample for a small commercial project
- 16. Presentation of the detailed work done for a small commercial project.

References

- 1. Bonda P. and Sonsnowchik K. (2007). Sustainable Commercial Interiors. John Wiley and Sons Publication.
- 2. Crafts. (2004). The office Designing for Success. 2004. Images Publication
- 3. Francis, D. (1997). The New Office. Conran Octopus Publication
- 4. Harmon. S and Kennon, K. The Codes guidebook for Interiors. Fifth Edition. John Wiley and Sons Publication.

Course Number	RMCS 321
Title	Entrepreneurship Development and Business management
Credit Hours General Objective	3(2+1)
	To create an awareness about various aspects of Entrepreneurship development and Business management
Specific Objectives	 Theory By the end of the course the students will be able to To create awareness on the aspects of goal setting, career formation, portfolios, financial management etc To help in understanding the client and designer relationships, and setting up a design studio To understand the ethics and professional conduct in business environment
	 By the end of the course the students will be able to <i>i.</i> To get information about the different firms, different designers and designing software ii. Application of skills of arranging portfolio effectively iii. Apply the various elements of art and principles of design and design process in developing plans iv. Making and displaying of different specifications of material and finishes mount boards
Theory Lecture outlin	105
2 Characteristics	of entropropeurs, entropropeurial attributes / competencies
3. Concept. need	d and importance of entrepreneurial development. Process of entrepreneurship

- 4. Evolution of entrepreneurship
- 5. Objectives of entrepreneurial activities,

development.

- 6. Types of entrepreneurs, functions of entrepreneurs,
- 7. Environment scanning and opportunity identification need for scanning spotting of opportunityscanning of environment
- 8. Identification of product / service starting a project; factors influencing sensing the opportunities.
- 9. Infrastructure and support systems- Good policies, schemes for entrepreneurship development
- 10. Role of financial institutions, and other agencies in entrepreneurship development.
- 11. Types of Enterprises and their characteristics. Steps involved in functioning of an enterprise Selection of the product / services
- 12. Steps involved in functioning of an enterprise Selection of form of ownership; registration capital sources
- 13. Steps involved in functioning of an enterprise Acquisition of manufacturing know how
- 14. Steps involved in functioning of an enterprise Packaging and distribution.
- 15. Steps involved in functioning of an enterprise Advertising and marketing
- 16. Planning of an enterprise Project identification
- 17. Planning of an enterprise Selection and formulation of project proposal
- 18. Planning of an enterprise Project report preparation
- 19. Planning of an enterprise Enterprise Management.
- 20. Production management Product, levels of products
- 21. Production management Product mix
- 22. Production management Quality control
- 23. Production management Cost of production
- 24. Production management Production controls
- 25. Material management Raw material costing, inventory control.
- 26. Personal management manpower planning, labour turn over, wages / salaries.
- 27. Financial management /accounting funds, fixed capital and working capital,
- 28. Financial management /accounting Costing and pricing, long term planning and short term planning
- 29. Financial management /accounting Book keeping, journal, ledger, subsidiary books, annual financial statement
- 30. Financial management /accounting Taxation.
- 31. Marketing management- market, types, marketing assistance, market strategies.
- 32. Crisis management- raw material, production, leadership, market, finance, natural etc.

- 1. Practical exercises on entrepreneurship motivation training micro lab
- 2. Practical exercises on Thematic Apperception Test (TAT), Entrepreneurship motivation training Tower Building
- 3. Interface with successful entrepreneurs
- 4. Visits to Government agencies for appraisal on policies
- 5. Visit to Non-government institutions promoting entrepreneurship
- 6. Market survey for identification of products
- 7. Product Selection
- 8. Product cost estimation
- 9. Project formulation and Project report writing
- 10. Critical analysis of financial institutions government and non-government
- 11. Preparation of Financial Statements and financial analysis of projects prepared
- 12. Learning product promotion techniques through market survey and literature
- 13. Developing brand name and label
- 14. Appraisal on packaging materials and techniques
- 15. Analysis of advertisements
- 16. Personal management Team building

References

- 1. Khanka,S.S(1996):Marketing of small industries products ,prabandh July-september
- 2. Gupta,C.B and N.P.Srinivasan(1992):Entrepreneurship Development in India, Sultan &Chand sons, New Delhi
- 3. Newmann, summer and warren (1976): The process of Management, print ice-Hall of India private Limited, New Delhi.

NAME OF DEPARTMENT FOODS AND NUTRITION

Course Number	FDNT 211
Title	Community Nutrition and Education
Credit Hours	3 (2+1)
General Objective	To develop an insight into nutritional problems of community and improve the situation by imparting nutrition education and drive community to utilize Govt. services.
Specific Objectives	 Theory By the end of the course the students will be able to: Acquire knowledge of nutritional assessment techniques. Visualize the types of malnutrition prevailing in the community. Assess the need for Nutrition education for the community. Understand Nutrition Policy and Nutrition programmes in operation in the country. Practicals By the end of the course the students will be able to: Assess nutritional status of population by anthropometry, clinical and diet survey techniques. Understand the organizational set up and functioning of different of the Govt. nutrition programmes. Prepare illustrative audio-visual aids on nutritional problems and treatment. Provide nutrition education to the community and bring changes in the dietary habits of community to improve health.
Theory Lecture outlin	es

- 1. Importance of community nutrition.
- 2. Nutrition education- objectives and methods, principles.
- 3. Malnutrition- definition and causes.
- 4. PEM Marasmus.
- 5. PEM Kwasiorkor.
- 6. Vicious cycle of malnutrition.
- 7. Vicious cycle of malnutrition
- 8. Assessment of nutritional status Anthropometry.
- 9. Anthropometry
- 10. Biochemical tests
- 11. Clinical assessment
- 12. Diet survey types , methods.
- 13. Major nutritional problems prevalent world wide.
- 14. Anaemia, Vitamin A deficiency, Iodine deficiency disorders, obesity, hypertension, diabetes mellitus prevalence in India.
- 15. National programmes and role of national and international agencies in improving nutritional status of the community Introduction.
- 16. Integrated Child Development Service (ICDS).
- 17. Supplementary Nutrition Program (SNP), Applied Nutrition Program (ANP).
- 18. Mid Day Meal Program (MDMP).
- 19. Vitamin A Prophylaxis Program.
- 20. Anaemia Prophylaxis Programme.
- 21. Food and Agricultural Organization (FAO).
- 22. World Health Organization (WHO).
- 23. United Nations Children's Emergency Fund (UNICEF).
- 24. UNDP, CARE
- 25. Voluntary and Government Agencies.
- 26. Nutrition education Objectives, methods, principles.
- 27. Nutrition education on anemia, vitamin A deficiency.
- 28. Nutrition education on iodine deficiency.
- 29. Nutrition education on obesity.
- 30. Nutrition education on hypertension and atherosclerosis.
- 31. Nutrition education on diabetes mellitus.
- 32. Prefinal examination.

- 1. Assessment of nutritional status of preschool children using nutritional anthropometry.
- 2. Assessment of nutritional status of women using nutritional anthropometry.
- 3. Household diet survey by weighment method.
- 4. Household diet survey by 24 hour recall method.
- 5. Clinical method of assessment.
- 6. Analysis of anthropometric, diet survey and clinical assessment data and report writing.
- 7. Collection of vital statistics from secondary source and interpretation of data.
- 8. Development of visual aids for nutrition education posters and charts.
- 9. Development of visual aids for nutrition education flip charts, books, flash cards.
- 10. Demonstration in the community on preparation of low cost supplementary foods using local resources.
- 11. Planning, of nutrition education programme for school children.
- 12. Practical on nutrition education to school children using the developed visual aids.
- 13. Planning, of nutrition education programme for the community.
- 14. Visit to an ICDS block, anganwadi center
- 15. Visit to industry producing supplementary food for ICDS.
- 16. Practical Examination

References	 Bamji M. S, Prahlad Rao N. & Vinodini reddy (2003). Text book of Human Nutrition (p-p 197-201), New Delhi. Oxford & IBH Publishing Co. PVT. LTD. Michael C Latham, Human Nutrition in the Developing World. Ithaca, New york, USA Srilakshmi.B (2005). Nutrition Science (pp 3-14), New Delhi. New Age International (P) Limited. Derrick. B. Jelliffe (1966), The assessment of the nutritional status of the community (With special reference to field surveys in developing regions of the World). World Health Organization, Geneva Sehgal, S. and Raghuvanshi, R.S. (2007) Text Book of Community Nutrition. ICAR, New Delhi. 	
Course Number	FDNT 212	
Title	Food and Nutrition Policy and Agriculture	
Credit Hours	2 (2+0)	
General Objective	• To impart knowledge on food and nutrition situation in India and associate food resources, farming systems, socio economic status, Govt. policies with food security and malnutrition issues.	
Specific	Theory	
Objectives	 By the end of the course the students will be able to Gain knowledge of food production, distribution and consumption trends of population in India. Understand the vicious cycle of poverty, low food production and malnutrition. Acquire insights of agricultural production, marketing, 	

postharvest processing and food security at family and national level.

- iv. Gain awareness of agriculture and nutrition policies/programmes of the country and analyze critically.
- v. Identify resources and organizations working for agriculture and food security.

Theory Lecture outlines

- 1 Food situation in India and in the world.
- 2 Food production and consumption trends, food balance sheets.
- 3 Role of nutrition in agricultural planning and national development.
- 4 Linkages between agricultural practices.
- 5 Food production, food distribution and nutritional status.
- 6 Food crop failure and malnutrition.
- 7 Poverty and vicious cycle of low food production.
- 8 Agricultural development and its effect on food availability.
- 9 Effect of food production and economic policies on food availability.
- 10 Impact of physical resources, farming systems, cropping system.
- 11 Inputs and manipulation, agricultural marketing system.
- 12 Post harvest processing of foods on food and nutrition situation.
- 13 Food distribution systems.
- 14 Food security. Concepts and definitions agriculture and food security.
- 15 Food security nutrition and health urbanisation Food security and food systems and food security.
- 16 Macroeconomic policies Employment and cash income, markets and food prices.
- 17 Effect of urban agriculture on the nutritional status of vulnerable groups.
- 18 Innovative approaches to enhance local food production.
- 19 Innovative approaches to improve food distribution systems.
- 20 Innovative and effective approaches to manage health risks of urban agriculture.
- 21 Implications for urban policies and programmes.
- 22 Food and nutrition security at national level.
- 23 Food and nutrition security at household level.
- 24 Nutrition policy implementation.
- 25 Nutritional impact of agricultural programmes.
- 26 Nutritional impact of agricultural programmes.....contn.
- 27 Food price control and consumer subsidy.
- 28 Contribution of national organizations for agricultural development.
- 29 Contribution of national organizations for agricultural development.....contn.
- 30 Contribution of international organization for agricultural development.
- 31 Contribution of international organization for agricultural development......contn.
- 32 Pre final examination.

- 1. Textbook on Economics of Agricultural Development by George W. Norton, Jeffrey Alwang, and my Friedman School colleague
- 2. William A. Masters. Nutrition policies and programmes FAO publications 2015
- 3. Bhatia MS. (1991). Agricultural Statistics at a Glance. Ministry of Agriculture, Govt. of India, New Delhi.
- 4. Census (1981, 1991, 2001).
- 5. India (2001). A Reference Annual. Publication Division, Ministry of Information about Broad casting, Govt. of India.
- 6. UNICEF (1999). The State of World's Children. Oxford University Press

Course N	umber F	FDNT 221
Title	Ν	Jormal and Therapeutic Nutrition
Credit Ho	ours 4	(3+1)
General C	Dbjective	• To impart knowledge of nutrient requirements for different age and physiological groups, dietary modifications in different diseases and plan balanced diets applying principles of nutrition.
Specific	Г	Theory
Objective	s E	By the end of the course the students will be able to i. Acquire basic knowledge of food groups, nutrient
		requirements, and principles of meal planning for different
		ii. Gain insight in to the nature and scope of therapeutic nutrition
		iii. Understand the etiology, incidence, nature, clinical symptoms, diagnosis, and dietary management of fevers, diseases of
		gastrointestinal tract, liver, heart, and metabolic syndromes like diabetes and obesity.
	P	Practical
	E	By the end of the course, the student will be able to
		i. Formulate food exchange system and application in planning nutritional balanced diets
		ii. Develop practical skills in planning and preparation of diets for the different age groups under normal/ physiological
		iii Plan and prepare therapeutically modified foods
		 iv. Develop practical skills in planning and preparation of modified diets for fevers, diseases of gastrointestinal tract, liver, heart, and metabolic syndromes like diabetes and obesity.
Theory L	ecture outlin	es
1.	Determinatio	n of nutritional requirements.
2.	Determination of nutritional requirements.	
3.	Determination of nutritional requirements.	
4.	Recommended dietary allowance, calorie consumption unit.	
5.	Recommended dietary allowance, calorie consumption unit	
6. 7	Food exchange list method.	
/.	Physiological changes during pregnancy.	
ð. 0	Complications in programmer.	
9. 10	Process of lactation	

- 11. Nutritional requirement during lactation.
- Infancy growth, development and nutritional requirement 12.
- Infancy growth, development and nutritional requirement Importance of breast feeding; Bottle Feeding. 13.
- 14.
- Weaning and supplementary foods. 15.
- Pre-school children -growth and development, food habits and nutritional 16. requirements.
- 17. School age child - growth and development, food habits and nutritional

requirements.

- 18. Adolescents- food habits and nutritional requirements and problems.
- 19. Geriatric nutrition -physiological and psychological changes during old age,
- 20. Nutritional requirements and consideration for diet planning for old age
- 21. Importance and modification of normal diet to therapeutic diets.
- 22. Importance and modification of normal diet to therapeutic diets.
- 23. Methods of feeding Normal and Tube feeding.
- 24. Parenteral feeding
- 25. Acute fevers aetiology, Symptoms, Dietary management.
- 26. Chronic Fevers- aetiology, Symptoms, Dietary management.
- 27. Chronic Fevers- aetiology, Symptoms, Dietary management.
- 28. Dietary management in gastrointestinal disorders Diarrhoea- aetiology, Symptoms, Dietary management.
- 29. Dietary management in gastrointestinal disorders Diarrhoea- aetiology, Symptoms, Dietary management.
- 30. Dietary management in gastrointestinal disorders Constipation- aetiology, Symptoms, Dietary management.
- 31. Dietary management in gastrointestinal disorders Peptic ulcer -aetiology, symptoms, Dietary management.
- 32. Liver functions and role in digestion
- 33. Dietary management in gastrointestinal disorders Peptic ulcer -aetiology, symptoms, Dietary management
- 34. Dietary management in liver diseases -Hepatitis- aetiology, symptoms and dietary management.
- 35. Dietary management in liver diseases -Jaundice- aetiology, symptoms and dietary management.
- 36. Dietary management in liver diseases Cirrhosis of liver- aetiology, symptoms and dietary management.
- 37. Cardiovascular disease Atherosclerosis -aetiology, symptoms.
- 38. Dietary management in atherosclerosis.
- 39. Cardiovascular disease -Hypertension- aetiology, symptoms.
- 40. Dietary management in hypertension.
- 41. Coronary artery disease aetiology, symptoms
- 42. Diabetes mellitus- Types of diabetes, aetiology, symptoms.
- 43. Dietary management in Diabetes mellitus.
- 44. Complications in Diabetes mellitus
- 45. Problems of weight control Overweight and obesity.
- 46. Dietary management in obesity.
- 47. Complications in obesity
- 48. Pre final examination.

- 1 Introduction to food exchange list, uses and application.
- 2 Planning, preparation and evaluation of balanced diet for an adult man and woman.
- 3 Planning, preparation and evaluation of balanced diet for a pregnant woman.
- 4 Planning, preparation and evaluation of balanced diet for a lactating woman.
- 5 Planning, preparation and evaluation of supplementary foods for infants.
- 6 Planning, preparation and evaluation of balanced diet for a preschool child.
- 7 Planning, preparation and evaluation of balanced diet for a school age child.
- 8 Planning, preparation and evaluation of balanced diet for adolescents.
- 9 Planning, preparation and evaluation of balanced diet for an elderly person.
- 10 Planning and preparation of modified diets liquid, semi solid and solid diets.

- 11 Planning and preparation of diets during fevers.
- 12 Planning and preparation of diets during diarrhea and constipation.
- 13 Planning and preparation of diets for hepatitis.
- 14 Planning and preparation of diets for overweight/obesity.
- 15 Planning and preparation of diets for hypertension and diabetes.
- 16 Practical Examination.

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- 4. Raghuvanshi, R.S. and Mittal, M. (2014). Food Nutrition and Diet Therapy. Westvills Publication Delhi.
- 5. Agarwal, A and Udipi, S. (2014). Text Book of Human Nutrition. Jaypee Medical Publication Delhi

Course Number	FDNT 222	
Title	Food Standards and Quality Control	
Credit Hours	3(2+1)	
General Objective	 To Impart knowledge on food safety, quality testing by objective and subjective evaluation and food hazards. To bring awareness about food adulteration and identification and the different standards laid by the food regulation authorities. 	
Specific	Theory	
Objectives	 By the end of the course the students will be able to Understand the importance of food safety and quality and its contribution to the productivity and countries development. The various quality factors that influence the food quality Gain knowledge on the various laws that are governing food safety and quality including the latest FSSAI 2006 of India Understand various types food toxicants and hazards Gain knowledge on chemical subjective and objective methods of evaluation of foods Understand the food safety management systems Vi. Understand the food safety management systems Vii. Acquire knowledge the role of HACCP, Sanitary and Phyto sanitory (SPS) agreements, WTO in agricultural and food trade 	
	Practical	
	 By the end of the course, the student will be able to Acquire hands on experience on sampling procedure for quality assessment Gain skill in techniques of physical, chemical and microbiological examination of food Judge food quality specifications to be maintained for trade Identification of food adulteration at different levels of trade using different techniques. 	
Theory Lecture out	tlines	

- 1 Importance of quality control and assurance.
- 2 Food laws and regulations. Prevention of Food Adulteration Act.

- 3 Food laws and regulations- Fruit Product Order.
- 4 Food laws and regulations- AGMARK.
- 5 Food laws and regulations- Essential Commodity Act.
- 6 Food laws and regulations- Consumer Protection Act.
- 7 Food laws and regulations- Bureau of Indian Standards.
- 8 Food laws and regulations- Codex Standards.
- 9 Food laws and regulations- FSSAI.
- 10 FSSAI....contn.
- 11 FSSAI....contn
- 12 Specifications and application of food standards for raw materials.
- 13 Specifications and application of food standards for food products.
- 14 Food additives.
- 15 Preservatives.
- 16 Coloring agents.
- 17 Antioxidants.
- 18 Emulsifying agents.
- 19 Leavening agents.
- 20 Stabilizing agents.
- 21 Various methods for the assessment of quality of different foods subjective methods.
- 22 Subjective methods.....contn.
- 23 Various methods for the assessment of quality of different foods objective methods.
- 24 Objective methods.....contn.
- 25 Food safety, risks and hazards HACCP, GRAS, GMP etc.
- 26 Food safety, risks and hazards HACCP, GRAS, GMP etc.....contn.
- 27 Food adulteration.
- 28 Prevention of food adulteration.
- 29 Food packaging principles and advantages.
- 30 Packaging material Metal and Glass.
- 31 Packaging material Paper, Plastic and other materials.
- 32 Pre final examination.

- 1 Sampling techniques for collection of agriculture, horticulture, animal foods and food products for examination.
- 2 Collection of food samples from different sources.
- 3 Physical examination and grading of grain, spices etc. for quality.
- 4 Exercise of identification of basic tastes sweet, sour, salty, bitter.
- 5 Sensory evaluation techniques triangle test.
- 6 Sensory evaluation techniques duo- trio test.
- 7 Development of a score card for evaluation of a food product.
- 8 Sensory evaluation of a food product.
- 9 Demonstration of objective tests for quality evaluation.
- 10 Detection of food adulteration in grain samples.
- 11 Detection of adulteration in fats, oils and milk.
- 12 Detection of adulteration in spices.
- 13 Collection of food products with artificial colouring and checking for quality.
- 14 Evaluation of microbiological quality of foods and water.
- 15 Visit to a quality control lab.
- 16 Practical examination.

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- 2. Jellinek, G. (1985). Sensory Evaluation of Foods: Theory and Practice. Ellis Honwood Ltd. Chichester, England.
- 3. Manual of Food Standards and Quality Control. (2014). Dept. of Foods and Nutrition, CCS HAU, Hisar.

Course Number	r FDNT 311	
Title	Food Hygiene and Sanitation	
Credit Hours	2 (1+1)	
General Object	• To impart knowledge on food and water hygiene, sources of contamination, food spoilage, food poisoning and hygienic practices for prevention of contamination.	
Specific Objectives	 Theory By the end of the course the students will be able to Gain knowledge of importance and principles of food and water hygiene. Develop awareness of water purifying techniques and criteria for standards. Acquire e knowledge of cause and sources of contamination of food and water. iv. Gain knowledge of types of food spoilage, food poisoning and health complications associated. 	
	 Practical By the end of the course, the student will be able to Identify food contamination through microbial analysis. Develop skills in techniques of water purification Learn hygienic food and water handling practices during food processing. Identify insanitary / adulterated food samples from vendors and collect and test for quality parameters. 	
Theory Lecture1Meaning2Water re3Purificat4Purificat5Criteria a6Food hyg7Green pl8Soil, air a9Food spond	e outlines and Principle of food hygiene. quirement and use, sources of water supply, potable water and its quality. ion of water. ion of watercontn. and standards, hardness of water and its treatment, defluoridation of water. giene: Contamination of foods from various sources. ants and fruits, animals, sewage and their health hazards. and water and their health hazards. bilage due to unhygienic handling practices.	
 Sanitary Bacterial <i>Clostridi</i> Food poi action. Food Poi Food Poi Food poi Poicorrow 	 Sanitary procedures for preparation, handling and storage of foods. Bacterial sources for food poisoning - Salmonella, Staphylococcal poisoning, Botulinum, Clostridium perfringens and B.cerus. Food poisoning - incubation period for food poisoning caused by different bacteria, mechanism of action. Food Poisoning – investigation of food poisoning, prevention and control. Food poisoning caused by agents other than microorganism. 	
16 Pre final	Pre final examination.	

- Orientation to importance of food hygiene and sanitation. Identification of microorganisms (slides). Slide preparation . Preparation of different media.

- Inoculation of unferent media. Inoculation of sample. Testing of water for physical quality. Testing of water for bacteriological quality. Importance of personal hygiene practices.

- 10 Hand washing SOP.
- 11 Practice of hygiene in Cooking practices.
- 12 Survey of hygiene and sanitary conditions in different food shops and food vendors and collection of food and water samples.
- 13 Identification of microbial contamination in food and water samples.
- 14 Visit to Food Corporation of India godown.
- 15 Visit to Food testing laboratory.
- 16 Practical examination.

- 1. "Food Toxicants, Naturally Occurring" in *ECT* 3rd ed., Vol. 11, by F. H. Hoskins, Louisiana State University.
- 2. IUFoST Scientific Information Bulletin,October 2008The microbiological safety and quality of food, Volume 2 By Barbara M. Lund, Tony C. Baird-Parker, Grahame Warwick Gould.
- 3. Adams M.K. and Moss M.O. (2000). Food Microbiology, New Delhi: Panima Corp.
- 4. Longree K.L. and Blaker G.C. (1982). Sanitary Techniques in Food Service. New York: John Wiley and Sons.
- 5. Park, K. (1997). Textbook of Preventive and Social Medicine. 1st Ed. Jabalpur: Banarsidas Bhanot

Course Number	FDNT 312		
Title	Food Analysis		
Credit Hours	3(1+2)		
General Objective	• To impart knowledge on principles, methods, and techniques of qualitative and quantitative physical, chemical and biological analyses of foods		
Specific Objectives	 Theory By the end of the course the students will be able to Understand the principles behind analysis of each of the proximate nutrients, minerals and vitamins present in food. Learn different tests suitable for evaluation the quality of carbohydrate, protein, lipids for both fresh and shelf life studies. 		
	 Practical By the end of the course, the student will be able to Handle equipment and instruments Analyze each of the proximate nutrients , minerals and vitamins present in food Demonstrate practical proficiency in a food analysis laboratory. 		
Theory Lecture out	tlines		
1 Sampling at 2 Proximate a	nd sampling techniques. malysis- moisture, ash.		

- 3 Crude fat, crude fiber.
- 4 Crude protein and carbohydrates by difference, Determination of starch.
- 5 Principles and methods of food analysis. Basic principles: Refractometry, polarimetry, densitometry.
- 6 Principles and methods of food analysis. Basic principles: HPLC.
- 7 Basic principles of food analysis in GLC.
- 8 Basic principles of food analysis in spectrophotometry.
- 9 Principles and methods of food analysis. Basic principles: electrophoresis, automatic amino acid analyzer.

- 10 Test for unsaturation of fats, rancidity of fats.
- 11 Quantitative analysis of protein by Biuret method, Ninhydrin method, Lowry's method and Dyebinding method.
- 12 Bioassays for protein quality of grains Chemical, microbiological, flurometric and colorimetric methods of analysis of fat soluble and water soluble vitamins.
- 13 Principles and methods for estimation of minerals: Atomic absorption spectroscopy.
- 14 Principles and methods for estimation of minerals: colorimetry, titrimetry.
- 15 Principles and methods for estimation of minerals: gravimetric methods.
- 16 Methods for determining physical and rheological properties of food.

- 1 Handling of equipment and instruments.
- 2 Preparation of samples.
- 3 Preparation of samples.
- 4 Preparation of solutions buffers.
- 5 Preparation of buffers.
- 6 Estimation of moisture in food stuffs.
- 7 Estimation of moisture in food stuffs.
- 8 Estimation of bulk density of foods.
- 9 Estimation of colour using spectrophotometer.
- 10 Physical analysis-specific gravity.
- 11 Quantitative estimation of proximate principles-Ash.
- 12 Quantitative estimation of proximate principles-Minerals.
- 13 Quantitative estimation of proximate principles-Fibre.
- 14 Quantitative estimation of proximate principles-Fat.
- 15 Estimation of free fatty acids.
- 16 Quantitative estimation of proximate principles-Protein.
- 17 Estimation of sugars-reducing .
- 18 Estimation of sugars-non-reducing.
- 19 Estimation of starch digestibility.
- 20 Quantitative estimation of vitamins by use of colorimetry.
- 21 Quantitative estimation of minerals by use of UV spectrophotometer.
- 22 Quantitative estimation of amino acids by use of paper chromatography.
- 23 Quantitative estimation of vitamins by use of HPLC.
- 24 Quantitative estimation of vitamins by use of HPLC.
- 25 Quantitative estimation of fatty acids by use of GC.
- 26 Quantitative estimation of pesticide residues by use of GC.
- 27 Quantitative estimation of minerals by use of atomic absorption spectrophotometer.
- 28 Quantitative estimation of minerals and vitamins by use of photofluorometry.
- 29 Estimation of food adulteration.
- 30 Estimation of food adulteration.
- 31 Estimation of food adulteration.
- 32 Practical Examination.

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- 7. NIN. (2003). A Manual of Laboratory Techniques.

Course Number F	INNT 321
	DIVI 521
Title C	Clinical Nutrition and Dietetics
Credit Hours 3	(2+1)
General Objective	To impart knowledge on pathological changes associated with nutritional deficiencies, metabolic and motility disorders and apply nutritional management principles for prevention and treatment of diseases.
Specific T Objectives B	 Theory By the end of the course the students will be able to Understand clinical changes in different nutritional deficiencies, metabolic and motility disorders. Understand the etiology, incidence, nature, clinical symptoms, diagnosis, and dietary management of kidney disorders. Acquire the knowledge of clinical changes in cancer and burns, and nutritional management. Interpret interaction between nutrients, infection and drugs.
P B	 Practical By the end of the course, the student will be able to Estimate blood, serum, urine samples for glucose, heamoglobin, lipid profile, kidney and liver functioning tests. Observe biochemical changes from the reports and compare with normal /safe/cut-off levels and evaluate the complexity of the disease or improvement.
Theory Lecture outline1Clinical Nutrition2Pathogenesis of m3Protein calorie m4Vitamin A deficit5Anemia, iodine d6Gastro intestinal m7Diseases of mout8Diseases of stoma9Diseases of stoma9Diseases of small10Diarrhoea- Symp11Constipation- symp12Diseases of liver-13Hepatitis.14Cirrhosis of liver15Pancreatitis.16Chronic obstructi17Diabetes mellitus18Cardio vascular d19Role of nutrients20Major enzymes u21Hypertension.22Renal disease - F23Urinary calculi.24Types of renal fa25Dialysis.	es - Introduction, nutritional status and disease, common deficiency diseases. nutritional deficiency diseases - macronutrient and micronutrient. alnutrition. ency. leficiency disorders. tract diseases- Introduction, different organs and diseases, diagnostic procedure. h and oesophagus. ach and duodenum. 1 and large intestine - diverticulitis, malabsorptive syndrome and tropical sprue. toms of diarrhea, causes, types. mptoms, causes, types of constipation, dietary treatment. -Jaundice.

27 Impact of tumor on host metabolism, syst28 Dietary management in cancer.

- 29 Burns. Physical destruction of skin, metabolic aberrations.
- 30 Alteration in nutritional requirement in burns.
- 31 Interaction between nutrients, infection and drugs.
- 32 Pre final examination.

- 1 Estimation of albumin in urine.
- 2 Estimation of glucose in urine.
- 3 Estimation of ketone bodies in urine.
- 4 Estimation of creatinine &creatine in urine.
- 5 Determination of bile pigments in urine.
- 6 Analysis of bile salts in urine.
- 7 Analysis of blood glucose level.
- 8 Estimation of total protein in blood.
- 9 Estimation of albumin and globulin in blood.
- 10 Estimation of serum hemoglobin.
- 11 Estimation of blood urea.
- 12 Estimation of total cholesterol.
- 13 Analysis of HDL cholesterol.
- 14 Analysis of LDL cholesterol.
- 15 Estimation of serum triglycerides.
- 16 Practical examination.

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- 6. Bhavana, S. (1999). Nutrition and clinical care. New Delhi Commonwealth Publishers.
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APPAREL AND TEXTILES

- Title Techniques of Fabric Construction
- **Credit Hours** 3 (1+2)
- General Objective To impart comprehensive knowledge on various techniques involved in making fabrics

Specific Objectives Theory

By the end of the course the students will be able to

- I. Gain in depth understanding of weaving, looms and their basic mechanics
- II. Understand in detail about the woven fabric structures
- III. Attain a thorough understanding of the basic weaves and their variations
- IV. Study in detail about the complex weaves
- V. Know about knitting and the machinery used to produce knits
- VI. Become familiar with other forms of fabric construction like macramé, crochet and felts

Practical

By the end of the course, the student will be able to

- I. Identify common fabric structures
- II. Identify weaves and be able to represent them graphically
- III. Study about handloom and be able to understand the parts and their functionality
- IV. Prepare samples of basic weaves
- V. Know about stitches used in knitting and be able to make samples of plain, knit & purl stitches
- VI. Make a sample of macramé with various knots
- VII. Prepare a crochet sample with various stitches
- VIII. Understand the process of manual felting

Theory Lecture outlines

- 1. History of weaving and looms
- 2. Woven fabrics simple woven structures and compound woven structures; characteristics of woven fabric
- 3. Classification of looms on basis of mechanics, means of running loom, structure and means of weft insertion
- 4. Parts of loom; loom accessories and their function
- 5. Mechanism of weaving: primary, secondary and tertiary motions
- 6. Basic weaves: Plain and its variations
- 7. Basic weaves: Twill and its variations
- 8. Basic weaves: Satin and its variations
- 9. Complex weaves: extra yarn fabrics, pile fabrics, leno
- 10. Complex weaves: damask and jacquard
- 11. Knitting: Terminology and principle of knitting
- 12. Knitting machine: parts and their function; types of knitting machine
- 13. Knitting stitches: plain, rib and purl; types of knit fabrics
- 14. Macramé: Tools and materials
- 15. Crochet: Tools and materials
- 16. Felt: Manufacturing process, properties and end uses.

- 1. Observation of fabric structures under magnifying glass (2)
- 2. Graphical representation of woven design (3)
- 3. Handloom and its parts (1)

- 4. Weaving calculations (1)
- 5. Yarn preparation for plain weave (1)
- 6. Setting of loom and weaving of plain weave fabric (2)
- 7. Sample preparation of different fabric constructions (6)
- 8. Knitting machine and its parts (1)
- 9. Hand knitting- plain, rib, purl (6)
- 10. Macramé types of knots (3)
- 11. Crochet –types of stitches (5)
- 12. Manual felting (1)

References

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- 4. Joseph, M. L. 1986. Introductory Textile Science. 5th ed. New York. CBS College Publishing.
- 5. Wynne A (1997) Textiles The Motivate Series, Macmillan
- 6. Kadolph S J (2013) Textiles: Pearson New International Edition, Pearson Education Ltd, Asia

Course Number	APTX 221	
Title	Textile Finishes	
Credit Hours	2 (1+1)	
General	To impart comprehensive knowledge on various ways of finishing textiles.	
Objective		
Specific	Theory	
Objectives	By the end of the course the students will be able to	
	I. Understand in detail about the various textiles finishes	
	II. Study in detail about basic textile finishes, surface finishes, functional	
	finishes	

- III. Know about basics of dyes and pigments
- IV. Gain an understanding of dyeing techniques for fibre, yarn and fabric
- V. Learn about styles and methods of printing

Practical

By the end of the course, the student will be able to

- I. Understand the pre-preparatory process of preparing the fabric for dyeing
- II. Learn to tie dye cotton fabrics with various types of dyes
- III. Prepare tie dyed and batik samples
- IV. Learn to print on cotton with blocks, screen & heat transfer

Theory Lecture outlines

- 1. Textile finishing: Definition and its importance; Classification of textile finishes: Chemical, mechanical, temporary, permanent, durable, renewable, semi permanent, reactive and additive finishes;
- 2. Processes of removing impurities from fabrics: Scouring, desizing, degumming, carbonizing, souring
- 3. Basic finishes that alter hand or texture: Fulling/milling, felting, singeing, stiffening, decatizing
- 4. Surface finishes: Bleaching, delustering, calendering, beetling, napping, flocking
- 5. Surface finishes: burnt out design, acid design, plisse design, tentering, shearing and brushing
- 6. Functional finishes: Water proof and water repellent finish, shrinkage control, wrinkle resistance
- 7. Functional finishes: Anti-static finish, anti-microbial finish, durable press and flame retardant finish
- 8. Dyes and pigments, classification of dyes
- 9. Application of dyes: direct, acid, basic

- 10. Application of dyes: vat, azoic, mordant, sulphur, reactive and disperse dyes
- 11. Dyeing techniques and equipment: Solution dyeing, fibre dyeing; tow and stock dyeing
- 12. Dyeing techniques and equipment: Yarn dyeing; skein and package dyeing and piece dyeing
- 13. Styles of printing: Direct, discharge and resist printing
- 14. Printing methods and equipment: Block, screen, stencil
- 15. Printing methods and equipment: Roller, heat transfer printing,
- 16. Tie and dye and batik

- 1. Finishing of cotton fabric: Scouring
- 2. Finishing of cotton fabric: Bleaching
- 3. Finishing of cotton fabric: Mercerization
- 4. Tying and dyeing of cotton fabric with direct dye (3)
- 5. Fabric designing by batik technique with napthol dye (3)
- 6. Printing of cotton fabric using Stencil (2)
- 7. Printing of cotton fabric using Block (2)
- 8. Printing of cotton fabric using Screen (2)
- 9. Printing of cotton fabric using Heat transfer

References

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- 2. Kadolph S J (2013) Textiles: Pearson New International Edition, Pearson Education Ltd, Asia
- 3. Shailaja D Naik Jacquie Wilson, Shailaja D. Naik (2006) Surface Designing of Textile Fabrics
- 4. Alex Russell (2011) The Fundamentals of Printed Textile Design, A&C Black
- 5. Charu Swami, (2011) Textile Design: Theory and Concepts, New Age International
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- 7. Cheryl Rezendes (2013) Fabric Surface Design, Storey Publishing.

Course Number	APTX 311		
Title	Garment and Accessory Designing		
Credit Hours	3(0+3)		
General Objective	To impart comprehensive knowledge on designing of garments and accessories.		
Specific	Practical		
Objectives	By the end of the course, the student will be able to		
0	I. Gain in depth understanding of garment designing for men, women and children.		
	II. Learn to design and construct garments suitable for men, women and children.		
	III. Know how to design accessories for men, women and children.		
	IV. Prepare accessories one each for men, women and children.		

- 1. Selection of figure template for men,
- 2. Selection of figure template for women
- 3. Selection of figure template for children
- 4. Designing of garments for women using different construction features: collar,
- 5. Designing of garments for women using different construction features: sleeve neckline
- 6. Designing of garments for men using different construction features: shoulder yoke, collar,
- 7. Designing of garments for men using different construction features: sleeve, cuff
- 8. Designing of garments for children using different construction features: Yoke, gather, pleats, tucks
- 9. Designing of garments for children using different construction features: shirring, smocking,

trimmings

10. Selection of one children garment (fancy frock) design from the above catalogue

11. Sourcing of material for designed frock

12. Drafting of fancy frock

13. Laying and cutting the fabric for fancy frock

14. Construction of fancy frock

15. Finishing of fancy frock and preparation of cost sheet

16. Finishing the garment and Selection of any one of the ladies garment -kameez (ladies) night dress/ gown and designing

17. Drafting the designed garment and material estimation

18. Sourcing for the designed ladies garment

19. Cutting the garment

20. Stitching the garment

21. Stitching the garment

22. Finishing the garment

23. Preparation of cost sheet and evaluation.

24. Accessories: introduction and classification- footwear, hand bags, belt, jewelery, gloves, hats, scarves and umbrella

25. Survey on types of material available in the market for different accessories for women, men and children

26. Designing of accessories for women

27. Designing of accessories for women- specs sheet

28. Selection of any one accessory

29. Selection of material for the accessory

30. Construction of accessory

31. Construction of accessory

32. Finishing the accessory

33. Designing of accessories for men

34. Designing of accessories for men- specs sheet

35. Selection of any one accessory

36. Selection of material for the accessory

37. Construction of accessory

38. Construction of accessory

39. Finishing the accessory

40. Designing of accessories for children

41. Designing of accessories for children- specs sheet

42. Selection of any one accessory

43. Selection of material for the accessory

44. Construction of accessory

45. Construction of accessory

46. Finishing the accessory

47. Cost estimation and developing cost sheet for accessories developed

48.Display of garments and accessories

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5. Peacock, J. 2000. Fashion accessories- The complete 20th century source book. London. Thames and Hudson.

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Course Number APTX 312

TitleRetailing and Merchandising-Textiles and Apparel

Credit Hours	2(2+0)	
General Objective	I.	To acquire knowledge regarding retailing & merchandising aspects with respect to textiles & apparels
-	II.	To know the significance of merchandising in the apparel industry
	III.	To study retail organisations and their set up & types of retail organizations
Specific	Theory	
Objectives	By the e	end of the course the students will be able to
U	I.	Gain information regarding trends in retailing and merchandising styles and patterns
	II.	Understand the process flow in the apparel industry
	III.	Be aware of the career opportunities in fashion and apparel retailing field
	IV.	Know the export import procedures and export promotion organisations

Theory Lecture outlines

- 1. Retailing and merchandizing- Terminology, concept and principles
- 2. Retailing retail life cycle, apparel merchandising
- 3. Retailing in India- market segmentation, key players
- 4. Evolution of retail and retail formats
- 5. Classification of retail units / retail formats store or onsite retailers (2)
- 6. Classification of retail units / retail formats store or onsite retailers (2)
- 7. Classification of retail units / retail formats -non store or off-site retailers
- 8. Merchandising Factors affecting merchandizing
- 9. Role and responsibilities of merchandiser
- 10. Merchandizing for buying house, departmental stores and export houses
- 11. Marketing research: Meaning, scope and classification
- 12. Steps involved in marketing research
- 13. Role of marketing research in product planning
- 14. Sale promotion and promotion mix: advertising (2)
- 15. Sale promotion techniques
- 16. Personal selling and publicity
- 17. Pricing methods and pricing of textiles (2)
- 18. Export and Import
- 19. Channels of distribution
- 20. Starting of export and import business and its procedure
- 21. Organizations involved in export promotion in India (2)
- 22. Visual Merchandising (VM) Functions and elements of VM
- 23. Visual Merchandising (VM) Techniques of VM display; types of window display settings
- 24. Visual Merchandising (VM) Display presentations, store layouts
- 25. Visual Merchandising (VM) Fixtures and accessories, trends in VM
- 26. WTO and its impact on retailing and merchandizing in textile and apparel industry (2)

- 1. Dickerson K.G,(2009) "Inside the fashion business" II Edition, Pearson Education
- 2. Kishan Kumar (2010) "Apparel Merchandising", Abhishek Publications
- Jeremy A. Rosenau, David L. Wilson (2014) "Apparel Merchandising: The Line Starts Here", A&C Black
- 4. John Donnellan (2013) "Merchandise Buying and Management", A&C Black.
- 5. Kincade D.H & Gibson (2012) "Merchandising of Fashion Products" Pearson education

Title	Traditional Textiles and Costumes of India	
Credit	Hours 3(2+1)	
Genera Objecti	ralTo impart comprehensive knowledge on traditional textiles and costumes of variactiveIndian states.	
Specifi Objecti	 Theory ves By the end of the course the students will be able to Know about the traditional woven, printed, painted and embroidered textiles popular in all the states in India Learn in detail about the traditional costumes and textiles of all the states of India Practical By the end of the course, the student will be able to Collect, document and develop scrap book of traditional motifs used in various traditional embroideries Learn to make samples of traditional embroideries of Punjab, West Bengal, UP, Gujarat & Karnataka. Collect, document and develop scrap book of woven textiles of India Collect, document and develop scrap book of various states of India Collect, document and develop scrap book of traditional of various states of India 	
1. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20.	History of Traditional woven textiles of India Woven Textiles: Dacca muslin and Calico Printing Woven Textiles: Brocades Traditional sarees of India: Jamdani, Baluchari Traditional sarees of India: Pochampalli, Patola and Ikat Traditional sarees of India: Pochampalli, Patola and Ikat Traditional sarees of India: Kanjivaram, Chanderi, Maheshwari Traditional sarees of India: Bomkai, Sambhalpuri, Vichitrapuri Traditional sarees of India: Bomkai, Sambhalpuri, Vichitrapuri Traditional sarees of India: Bomkai, Sambhalpuri, Narayanpet Traditional sarees of India: Gadwal, Venkatagiri, Narayanpet Traditional sarees of India: Irkal, Kasavu, Tanchoi Traditional woven and embroidered shawls of India: Shawls of Kashmir, Himachal Pradesh, Gujarat Traditional woven and embroidered shawls of India: North Eastern States Printed textiles: Dabu printing, Bagru printing, Sanganeri printing, Bagh printing Tie and dyed textiles of Rajasthan and Gujarat Painted textiles: Kalamkari, Madhubani, Warli, Patchitra Painted textiles: Phad and Pichhavai Embroideries of different states of India: Chamba Rumal, Chikankari and Bagh of Punjab Embroideries of different states of India: Embroideries of Gujarat, Embroidery and Rabari work of Bihar	
20. 21. 22. 23.	Embroideries of different states of India: Pipli work of Orissa, Manipuri Embroidery Geographical Indications obtained for traditional Indian textiles Traditional costumes of Jammu and Kashmir, Himachal Pradesh, Punjab	

- 24. Traditional costumes of Haryana, Rajasthan and Gujarat
- 25. Traditional costumes of Uttar Pradesh, Madhya Pradesh and Bihar.
- 26. Traditional costumes of Maharashtra and
- 27. Traditional costumes of Orissa, West Bengal
- 28. Traditional costumes of seven north east states
- 29. Traditional costumes of seven north east states

- 30. Traditional costumes of Tamilnadu, Andhra Pradesh, Telangana,
- 31. Traditional costumes of Karnataka and Kerala
- 32. Importance and market scenario of traditional Indian textiles and their impact on modern textiles industry

- 1. Documentation of motifs of traditional Indian embroideries
- 2. Sample preparation of traditional Indian embroideries Phulkari of Punjab
- 3. Preparation of sample with Kantha work of Bengal.
- 4. Preparation of sample with Chikankari of Uttar Pradesh.
- 5. Preparation of sample with Kasuti of Karnataka
- 6. Preparation of sample with Kutch work of Gujarat.
- 7. Documentation of woven textiles of India
- 8. Adaptation of traditional motifs and designs in contemporary textiles
- 9. Sketches and development of scrap book
- 10. Development of scrap book of traditional costumes of different states
- 11. Creating contemporary costumes for men by taking inspiration from traditional costumes
- 12. Creating contemporary costumes for women by taking inspiration from traditional costumes
- 13. Creating contemporary costumes for children by taking inspiration from traditional costumes
- 14. Visit to museum
- 15. Visit to art gallery
- 16. Report submission

- 1. Bhatnagar, P. 2005. Decorative Design History in Indian Textiles and Costumes. Chandigarh, Abhishek Publication.
- 2. Chattopadhyay, K. 1977. Indian Embroidery. New Delhi, Wiley Eastern Limited
- 3. Harney, J. 1997. Traditional Textiles of Central Asia. London. Thomesand Hudson Ltd.
- 4. Krishna, R A. 1966. Banaras Brocades. New Delhi. Crafts museum.
- 5. Lubell, C. 1976. Textile Collection of the World. Vol. 2. London. United States publication.
- 6. Mehta, R J. 1970. Master Piece of Indian Textiles. D. B. Taraporevala Sons and Co. Private Ltd.
- 7. Treasure of Indian Textiles. 1980. Calico Museum. Ahmedabad. Marg Publication Bombay.

NAME OF DEPARTMENT EXTENSION EDUCATION COMMUNICATION MANAGEMENT

Course Number	EECM 211	
Title	Women in Agriculture	
Credit Hours	3(2+1)	
General Objective	This course motivates the students to understand the status of women specifically in agriculture and thereby instigates them to find out ways and means to tackle the problems of women in agriculture, different programmes, policies, institutions and agripreneurship	
Specific Objectives	 Theory iv. By the end of the course, the students will be able to understand the status of women in agriculture and identify the factors associated with the poverty of women and measures to reduce poverty. v. They can comprehend the meaning of feminization of agriculture and gender issues and meaning of empowerment and the government programmes for women. vi. They can recognize the occupational health hazards and drudgery of women in agriculture and the preventive measures. They can understand the technological needs of women in agriculture and strategies of transfer of technology to fill the gaps. 	
	ii. By the end of the course the students will get exposure to the role of women in agriculture, get familiarized with the women friendly tools and devices,	

Theory Lecture outline

- 33. Evolution of agriculture in India: Introduction, evolution of agriculture
- 34. General agricultural production activities: Introduction, meaning, concepts
- 35. Agricultural and allied sectors in rural India: Introduction, meaning, concepts
- 36. Role of women in agricultural sector: Introduction, participation, role of women

agripreneurship & farm women training.

- 37. Role of women in allied sectors: Introduction,, Participation, role of women
- 38. Socio economic status of farm women: Concept & meaning, measures for socio-economic development
- 39. Health & nutrition status of women in agriculture: Introduction, Major causes for poor health and nutritional status, Effects of poor health and nutritional status
- 40. Women & Poverty: Meaning ,causes and reasons

- 41. Feminization of Agriculture Issues: Gender segregated and segmented labor force, Flexible labor force, Wages and benefits, Training and skills, women in small and marginal farms, women as independent farmers, feminization and empowerment, data gaps in coverage on women's labor, constraints
- 42. Categorisation of women in agriculture: Introduction, Characteristics and categorization of women in agriculture
- 43. Women in Organized & Unorganized sectors: women in the work force, women in unorganized sector, contribution and composition in economy, occupational profile of unorganized labour, need for social security for women in unorganized sector
- 44. Occupational Health Hazards: Occupational health hazards & women, workplace hazards to women's reproductive health, causes of health hazards, remedial measures
- 45. Types of Occupational Health Hazards: Activity specific, casual factors
- 46. Pesticides related health hazards and preventive measures
- 47. Women and drudgery: Introduction, indicators of drudgery, drudgery reducing tools and implements
- 48. Technological needs of farm women: Identification of technological needs -life cycle approach, knowledge empowerment technologies, drudgery reduction, value addition technologies, gainful and additional employment technologies,
- 49. Income generation technologies: Introduction and types
- 50. Women friendly tools and implements: Types of tools and implements
- 51. Gender issues in agriculture and allied sectors: Gender issues in agriculture, livestock management, forestry and fishing, gender & ICT and Media, access to resources or ownership of assets, Household Headship, Migration
- 52. Government programmes for women: District rural development agency (DRDA), Schemes of the ministry of women and child development: Swa-Shakti,Swayamsiddha,Swawlamban Programme,Support to Training and Employment Program, Institutional services, Balika mandals, Girl child protection scheme, Rashtriya Mahila Kosh (RMK), Swarnajayanthi Gram Swarozgar Yojana(SGSY)
- 53. Institutions for women in agriculture: Agricultural Technology Management Agency (ATMA), Directorate of Research on Women in Agriculture (DRWA)
- 54. Empowerment of Women :Concept & Indicators
- 55. Empowerment of women: Dimensions & Ways
- 56. Agripreneurship and training to farmwomen.: Meaning, concepts of Agripreneurship
- 57. Government organizations for promoting entrepreneurship: MANAGE, NISIET, SISI, NIRD
- 58. Non-Government organizations for promoting entrepreneurship: ALEAP
- 59. Programmes and schemes for promoting enterprises : Farm based
- 60. Programmes and schemes for promoting enterprises :Nonfarm based
- 61. Programmes and schemes for promoting enterprises : Trade related.
- 62. Strategies for Transfer of Technologies: Technology transfer, types of technology, Nature of technology, Salient features in development of rural technologies, Strategies for transfer of technologies
- 63. National Commission For Women: A brief history, Mandate of the and constitution of the commission, Publications
- 64. National Policy for Women in Agriculture: Mission, Background, Objectives

- 17. Field visit to observe the role of women in agriculture
- 18. Field visit to observe the role of women in agriculture
- 19. Field visit to observe the role of women in agriculture
- 20. Field visit to observe the role of women in agriculture
- 21. Visit to farm machinery unit to observe women friendly tools and devices
- 22. Visit to farm machinery unitto observe women friendly tools and devices
- 23. Visit to an agripreneurship unit
- 24. Visit to an agripreneurship unit
- 25. Visit to a farm women training institution
- 26. Visit to a farm women training institution
- 27. Collection of success story
- 28. Collection of success story
- 29. Presentation of success story

- 30. Presentation of success story
- 31. Practical examination
- 32. 16. Practical examination

References

- 7. Kiran, S. and Vasantha, R. (2012). Extension Education- New Horizons. Kalyani Publications.
- 8. Nayak sarojini and Nair Jeevan. Women's Empowerment in India. Pointer publishers.
- 9. Gupta Debabrata Das. (2008). Extension Education- core contents and emerging Areas. Agrobios.
- 10. Benerji Anitha and Sen Raj Kumar. (2000). Women and Economic Development. Deep & Deep publications Pvt. Ltd
- 11. Prasad Kiran. (2004). Communication and Empowerment of Women: strategies and policy insights from India. The Women Press. Delhi.
- 12. Ray, G.L. (1991). Extension Communication and Management. Kalyani publications.

Course Number EECM 221

Title Extension Training Management

Credit Hours 3(1+2)

General Objective This course enables the students to understand the different training concepts, training types, analyze the training needs of an organization, assess, design and implement various methods, techniques and evaluate the training

Specific Objectives Theory

- iii. By the end of the course, the student will be able to understand the meaning of training and types of training
- iv. The students get acquaint with designing & conducting training, training methods & training evaluation.

Practical

ii. By the end of the course the students will be able to acquire the skills on different training methods to be used in training .

Theory Lecture Outlines

- 17. Training: Meaning, Definition, Need and importance, Identification of training need
- 18. Types of training: Extension trainings: Institutional training, Non- institutional training, Comprehensive training, Organization trainings;Pre-Service training,In-service training: Induction or orientation training, Foundation Training, On-the-Job training, Promotional training, Refresher training
- 19. Training process: Phases of training process; Pre-training, Training, Post training
- 20. Training Phases and its management: Need Assessment, Training objectives, meaning and definition, Types of objectives: General, Specific; Importance of training objectives, Components, Task, Condition, Standard, Important, considerations, formulation of training objectives, Accurate action verbs, Method of writing
- 21. Qualities of a good trainer- communication skills, Questioning, Handling Difficult Situations, training skills, motivational skills, facilitation skills and technical skills
- 22. Adult learning: Characteristics of adult learner, Difference between Pedagogy and Andragogy
- 23. Facilitation skills in training: Facilitation role of trainer, Facilitator meaning and definition, Factors of facilitation, Trainer like qualities
- 24. Problem and prospects of training.
- 25. Steps in module designing: Introduction, Role of Training, Steps,Need assessment, Framing objectives
- 26. Steps in module designing (contd):Planning overall schedule of training, Planning detailed training sessions, Managing, training, Evaluation of training
- 27. Training methods: Interactive lecture, Interactive demonstration, Field trip, Group discussion
- 28. Training methods: Case study, Role play, T- group training, ICT, Folk media

- 29. Training evaluation: Meaning of evaluation, Areas of evaluation, Objectives, Principle Steps and indicators of training evaluation.
- 30. Training evaluation: Measuring reaction, learning, behaviour and result, Tools of evaluation, Pre test /Post test, Opinion/attitude questionnaire, Trainer observation, Trainer/trainee group evaluation session, Training practice session, Follow -up evaluation
- 31. Introduction to HRD: Need, Concept, Outcomes, Functions, Goal of HRD system, HRD Approaches
- 32. Important training institutions in India: MANAGE, NAARM, EEI'S, NIRD, MCRHRD

- 33. Visit to state level training institute
- 34. Visit to state level training institute
- 35. Visit to vocational training institute
- 36. Visit to vocational training institute
- 37. Hands-on-experience with need analysis and writing training objectives
- 38. Hands on experience with need analysis and writing training objectives
- 39. Hands-on-experience on training methods
- 40. Hands-on-experience on training methods
- 41. Hands-on-experience on training methods
- 42. Hands-on-experience on training methods
- 43. Hands-on-experience on training methods
- 44. Hands-on-experience on training methods
- 45. Familiarization with monitoring tools of training
- 46. Familiarization with evaluation tools of training
- 47. Familiarization with offline training module
- 48. Familiarization with online training module
- 49. Preparation of training module
- 50. Preparation of training module
- 51. Designing of training programme
- 52. Designing of training programme
- 53. Conducting of training programme
- 54. Conducting of training programme
- 55. Evaluation of training programme
- 56. Evaluation of training programme
- 57. Analysis of HRD programmes of academic institutions
- 58. Analysis of HRD programmes of corporate institutions
- 59. Interaction with HR D professionals
- 60. Interaction with HR D professionals
- 61. Presentation of reports
- 62. Presentation of reports
- 63. Final practical examination
- 64. Final practical examination

- 6. Gupta, C.B. (2001). Human Resource Management. Sultan Chand and Sons.
- 7. Dahama, O.P. and Bhatnagar, O.P. (2003). Education and Communication for Development. Oxford and IBH Publishing Co. Pvt. Ltd.
- 8. Lynton, R.P. and Pareek, V. (2008). Training for Development. Vistaar Publications.
- 9. Narwani, G.S. (2002). Training for Rural Development. Rawat Publication.
- 10. Saxena, J.P. and Kakkar, A.T. (2000). Training and Development

Course Number	EECM 311
Title	Project Management
Credit Hours	2(1+1)
General Objective	This course facilitates the students to understand the different phases involved

in project management: from the procedure of writing project proposal to review of the project.

Specific Objectives

- Theory
 - iii. By the end of the course, the student will be able to understand the meaning of project management, project proposal, concept note, project designing and project planning.
 - iv. The students get acquaint with market survey, market and demand analysis, technical analysis, financial analysis and environmental impact analysis.

Practical

ii. By the end of the course the students will be able to acquire the skills to write project proposal, prepare budget and cash flow statement, compute break –even point etc., and also the skills to compute net working techniques.

Theory Lecture Outlines

- 1. Overview of project management : Background, meaning of project, characteristics of project, meaning of Project Management and types of projects
- 2. Project management: Elements of management
- 3. Project proposal: Meaning, project designing: meaning and principles
- 4. Concept note: Meaning and steps in preparation
- 5. Project initiation: Generation of ideas, monitoring of environment, appraisal, Screening of ideas and project rating index
- 6. Resource allocation framework: Introduction, key criteria, investment strategies, Portfolio planning tools, strategic position and action evaluation (SPACE), interface between strategic planning and capital budgeting
- 7. Market and demand analysis: Market and demand analysis, situational analysis and specification of objectives, collection of secondary information and evaluation of secondary information
- 8. Steps in market and demand analysis: Market survey, steps in a sample survey of the market, demand forecasting, market planning
- 9. Environmental appraisal of projects: Concept, types and dimensions of a project, stress on environment, environmental resources / values
- 10. Environmental impact analysis: Meaning and scope , objectives, methodology for conducting a study, major issues, impact assessment methodologies
- 11. Technical analysis: Meaning, material inputs and utilities, manufacturing process / technology, product mix etc.,
- 12. Financial analysis: cost of project, meaning of financing, estimates of sales and production working capital requirement and its financing
- 13. Financial analysis : Profitability projections, break even point, projected cash flow statements, projected balance sheets
- 14. Budgeting: Meaning, process, types, budget control, cost-benefit analysis
- 15. Terminology of networks: net work preparation, uses of networks, terms used in networks
- 16. Project management techniques: PERT, CPM, ASBC and Gantt chart

- 1. Visit to technology generation project
- 2. Visit to technology generation project
- 3. Visit to transfer of technology project
- 4. Visit to transfer of technology project
- 5. Collection and screening of case studies on project management and report writing
- 6.Collection and screening of case studies on project management and report writing
- 7. Writing project proposal
- 8. Writing project proposal
- 9. Presentation of project proposals
- 10. Visit to funding agency
- 11. Visit to funding agency

- 12. Working on Project management techniques: PERT, CPM, WBS
- 13. Working on Project management techniques: PERT, CPM, WBS
- 14. Working on Project management techniques: PERT, CPM, WBS
- 15. Working on Project management techniques: PERT, CPM, WBS
- 16. Practical examination

References:

- 1. Jr. Samuel J. Mantel., Meredith jack r., Shafer Scott M., Sutton Margaret M. and Gopalan M.R. (2006). Project Management- core Text book. Wiley India (p) Ltd.
- 2. Adhikary M.M., Sarkar A., Acharya S.K. and Basu D. (2006). Partipatory planning and Project management in Extension Sciences. Agrotech publishing academy.
- 3. Baars Wouter . (2006). Project Management Handbook.
- 4. D. Dipak and Basavaprabha. (2010). A Handbook of Extension Education. Agrobios (India).
- 5. Sethi Nishi., Kaushik Sushma., Rani Seema and Goyal Ramesh K. (2009). Extension and Communication Management. Agrotech publishing academy.
- 6. Newton paul. (2015). principles of project management-project skills.
- 7. Khanka, S.S. (1999). Entrepreneurial Development. S. Chand and company Ltd.

Course Number	EECM 321
Title	Information and Communication Technology
Credit Hours	3(1+2)
General Objective	This course facilitates the students to understand the importance and scope, methods, means and tools of information technology.
Specific Objectives	 Theory iii. By the end of the course, the student will be able to understand the need and importance of Instructional technology iv. The students get acquaint with audio visual aids, conventional communication technologies, IT tools IT enabled services and social networking.
	Practical By the end of the course the students will be able to acquire the skills to v. Prepare audio visual aids

- vi. Use conventional communication technologies
- vii. Handle the IT tools and different software
- viii. Browse social networking websites

Theory Lecture outlines:

- 17. Information Technology Meaning, importance and Scope
- 18. Communication Process, Models, Barriers and Types of Communication
- 19. Conventional and New media technologies Classification and Types
- 20. Conventional Communication technologies Audio Visual Media, classification, advantages and disadvantages
- 21. Conventional Communication technologies Contact methods Individual, Group and Mass contact methods, classification, advantages and disadvantages
- 22. Conventional Communication technologies Folk Media, Classification, Advantages and Disadvantages, Difference between Traditional and Modern media

- 23. IT Devices: CD ROM, DVD, Desktop computers, Laptops, Tablets, LCD Projector, Printers and Electronic media Satellite Radio and Television, Internet, Intranet
- 24. IT tools Synchronous and Asynchronous Informative, Constructive, Communicative, Collaborative
- 25. Informative and Communicative tools Internet, Intranet, Wikis, Emails, SMS etc
- 26. Constructive tools Word processing, Power point, Photoshop, Audio video recording and editing softwares
- 27. Collaborative tools Discussions and online forums etc.
- 28. Networking LAN, WAN, Social networking Facebook, Twitter
- 29. Social networking tools Blogs, Websites, Wikipedia, Facebook, Twitter, You tube, Instagram, Googl, Flipped classrooms etc.
- IT enabled services Call centre, Helpdesks, Data warehouse/ Knowledge management and archiving, Transcription centres, GIS mapping, Customer support services and Electronic distribution
- 31. IT enabled services and their impact on the society
- 32. Criteria for selection and evaluation of ICT tools Conventional and New media

- 33. Understanding the communication Process
- 34. Orientation to types of communication
- 35. Orientation to Conventional communication technologies Audio
- 36. Orientation to Conventional communication technologies Visual Posters
- 37. Orientation to Conventional communication technologies Visual charts
- 38. Orientation to Conventional communication technologies Visual Flash cards
- 39. Orientation to Conventional communication technologies Visual -Flannel graphs
- 40. Orientation to Conventional communication technologies Audio Visual Talking doll, Drama and Video
- 41. Orientation to Conventional communication technologies Methods of contact individual, Group and Mass contact methods
- 42. Orientation to Conventional communication technologies Methods of contact individual contact Personal interview
- 43. Orientation to Conventional communication technologies Methods of contact Group contact Demonstration, Debate and Symposium
- 44. Orientation to Conventional communication technologies Methods of contact –Mass contact Puppet show and Drama on social connected topics
- 45. Handling of Conventional communication devices Projectors
- 46. Handling of Conventional communication devices -Computers
- 47. Orientation to the IT tools Informative Internet, Intranet, Wikis etc.
- 48. Browsing through the internet on a selected topic through wikipedia
- 49. Orientation to the IT tools Constructive Word processing, Power point
- 50. Prepare a Word document on the selected topic
- 51. Prepare a Power point presentation on a selected topic
- 52. Orientation to the IT tools Collaborative tools Discussions and online forums etc.
- 53. Browsing through different blogs on a selective topic
- 54. Browsing through different Flipped classroom on a selective topic
- 55. Orientation to the IT tools Communicative Emails, SMS etc.
- 56. Open a new Email account and send information collected from the former excercises
- 57. Orientation to social networking sites Open a Facebook account to use for social awareness campaign
- 58. Presentation of the collected information from the Internet
- 59. Presentation of the collected information from the Internet
- 60. Presentation for the opening of Email account and present the information collected
- 61. Presentation for the opening of Email account and present the information collected
- 62. Presentation of the Power point presentation on selected topic
- 63. Presentation of the Power point presentation on selected topic
- 64. Practical examination

References:

- 7. Dubey, V.K. (2008). Extension Education and Communication. New age international (P) Ltd.
- 8. Vanangamudi, K., Venkatachala, R., Ilamurugu, k., Djanaguiraman, M. and Sridevy, S. (2010). E-learning : An experiences. Agrobios(India).
- 9. Prasad Kiran. (2004). Information and communication Technology-Recasting Development. B.R. Publishing corporation.
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- 11. Silberschatz Abraham., Galvin Peter Baer. and Gagne Greg. Operating system concepts. Ninth edition. John wiley & sons. Inc.
- 12. Tanenbaum Andrew, S. (2009). Modern operating systems. Third edition. Pearson Education, Inc.

Course Number	EECM 322
Title	Diffusion and adoption of Homestead Technologies
Credit Hours	3 (2+1)
General Objective	This course facilitates the students to understand the homestead innovations spread among the women in the society by getting into the insights of diffusion concept and adoption process, and innovation decision process, adopter categories and their characteristics and factors influencing adoption.
Specific Objectives	 Theory iii. By the end of the course, the students will be able to understand the meaning and process of diffusion & adoption, different concepts related to diffusion & adoption process. iv. The students will also gain knowledge on different homestead technologies

Practical

ii. By the end of the course the students will be able to collect information on different homestead technologies and exposed to diffusion & adoption process in villages.

Theory Lecture outlines

- 1. Diffusion: Concepts of diffusion, innovation, innovativeness, reinvention, Communication channels and social system
- 2. Diffusion: Social change, social structure, adoption, rate of adoption, localite, cosmopolite, homophily, heterophily, consequences, discontinuance, opinion leadership, change agent, norms
- 3.Elements of Diffusion process: Introduction, elements of diffusion process: innovation, communication channels, time.
- 4. Diffusion process: social system: optional, collective, authority, contingent
- 5. Innovation Diffusion Process: Concept, model of ID process
- 6. Types of innovation-decision process
- 7. Consequences of innovations: concepts
- 8. Adoption: Meaning, adoption process, five stage process
- 9. Factors influencing adoption : Personal, situational, social
- 10. Consequences of adoption: Meaning, desirable/undesirable, functional versus dysfunctional, direct versus indirect, anticipated versus unanticipated, manifest versus latent
- 11.Constraints in adoption of technologies
- 12. Innovation diffusion process: Adoption, confirmation, rejection, dissonance
- 13. Innovation Decision Process: Rate of adoption, over adoption, innovativeness
- 14. Discontinuance: Replacement, disenchantment, forced discontinuance, over adoption,
- 15. Attributes of an Innovation and their influence in transfer of technology: Meaning of

attributes, relative advantage

- 16. Attributes of an innovation: Complexity, trialability, predictability, compatibility, observability
- 17. Adopter categories: Concept and types
- 18. Homestead Technologies: Meaning, women and technologies
- 19. Homestead Technologies: Home technologies, farm technologies
- 20. Characteristics of innovation with special reference to homestead technologies: Affirmative, comprehensive, drudgery free
- 21. Process of homestead technology development: Technology research, generation, technology testing, adaptation, integration
- 22. Channels of communication for homestead technology: Technology research, generation, testing, adaptation, integration
- 23. Diffusion network: Homophily, Heterophilly, Localite versus Cosmopolite Channels
- 24. Social Change: Concept, theories, dimensions
- 25. Social Change: Factors associated with the acceptance and resistance of change
- 26. Change Agent: Sequence of change -agent roles, factors in change agent success
- 27. Agencies of change: Concept, role in diffusing technologies
- 28. Opinion Leadership: Meaning, Hypodermic Needle Model, The Two Step Flow Model, Monomorphic leaders, Polymorphic leaders
- 29. Opinion Leadership: Selection of opinion leaders, sociometric, informants ratings, self- designating technique, observations
- 30. Change Process: Factors affecting change
- 31. Different homestead technologies with special reference to Home Science
- 32. Strategies for Transfer of Home Science Technology and constraints in adoption

Practical Outlines

- 1. Collection of Homestead Technologies
- 2. Collection of Homestead Technologies
- 3. Adoption in locality- Observation
- 4. Adoption in locality- Observation
- 5. Adoption in locality- Observation
- 6. Visit to different entrepreneurs adopted home stead technologies for business enterprise
- 7. Visit to different entrepreneurs adopted home stead technologies for business enterprise
- 8. Visit to different successful SHGs
- 9. Visit to different successful SHGs
- 10.Categories of adopters among SHG members
- 11. Categories of adopters among SHG members
- 12. Analysis and presentation of report
- 13.Identification of change agents in a locality
- 14.Identification of change agents in a locality
- 15. Analysis and presentation of report
- 16.Practical examination

- 7. Rogers, M. (2010) Diffusion of innovations. Third Edition. Library of Congress Cataloging in Publication Data.
- 8. Gupta Debabrata das. (2008). Extension Education- Core contents and emerging Areas. Agrobios (India).
- 9. De Dipak and Basavaprabha. (2010). A Handbook of Extension Education. Agrobios (India).
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- 11. Supe, S.V. (2011). Integrated Extension Education. Agrotech publishing Academy.
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NAME OF DEPARTMENT

HUMAN DEVELOPMENT AND FAMILY STUDIES

Cour	se Number	HDFS 211
Title		Marriage and Family Dynamics
Cred	it Hours	3 (2+1)
Gene	ral	To impart knowledge about goals, functions, forms of marriage and
Obje	ctive	family, family life cycle, changing trends in roles, areas of readiness for
9		marriage, marital adjustments, family crisis events, coping strategies,
		importance of marital counseling.
Speci	fic	Theory
Ōbje	ctives	 By the end of the course the students will be able to understand Different concepts related to marriage and family, gender roles, alternative forms of marriage and family , stages of family life cycle and developmental tasks Gain insight on different areas of readiness to marriage, techniques of marital adjustments , causes for marital dissolution, divorce and their effects Understand about family crisis, family stress and coping strategies Know the need and importance of premarital, marital, family counseling and family life education
		• Aware of different laws related to marriage
		 Practical By the end of the course the students will be able to Study the roles across family life cycle Analyze the leading factors for mate selection in different cultures Study the alternative forms and crisis events existing in the family Identify the adjustment techniques and coping strategies adopted by families Aware of various issues related to marital and family counseling
Theo	ry Lecture ou	ıtlines
1.	Marriage- De	finition, views, goals, functions
2.	Types/forms	of marriage in India- Ancient forms and prevalent forms in India
3.	Rituals and co Christian, Sik	eremonies of marriage in different religions of India- Muslim, Hindu, th, Parses'
4.	Readiness for marriage – Ps Moral, Econo	marriage– Definition, need and importance, areas of readiness for sychological, Physiological, Intellectual, Social, Emotional, Spiritual- omic readiness.
5.	Mate selection	n- meaning, field of mate selection, guidelines for mate selection, ways of n in tribal India.
6.	Theories of m	hate selection- Role theory. Value theory. Exchange theory.
0.	Complement	ary theory, Sequential theories. Factors responsible for mate selection.
7.	Engagement	and its importance, premarital counseling – objectives. Need and areas
8.	Marital roles	and behaviors - Definition and importance of marital roles, marriage as
	status and rol	e transition, determinants of marital role behaviour,

- 9. Concepts related to gender roles- Bipolar gender roles, androgynous gender roles, Sex role transcendence, factors responsible for change in gender roles, Role conflict
- 10. Marital adjustment- definition, Areas of marital adjustment, factors influencing marital adjustment, types of marital relations and adjustments
- 11. Marital adjustments across the family life cycle, obstacles in marital adjustment, marital adjustment techniques
- 12. Marital success, criteria of marital success, marital education- goals
- 13. Marital dissolution- definition, types and factors- personal, societal, demographic, life

course, family process factors, Separation distress- factors, factors responsible for refraining from divorce after marriage failure

- 14. Divorce- Social process of marital failure and divorce- grounds, No-fault divorce
- 15. Consequences of divorce on families, adjustments to divorce
- 16. Alternatives to marriage- singlehood, heterosexual cohabitation/ consensual union, homosexual union, reasons, merits and demerits
- 17. Family- Definition, characteristics, functions
- 18. Family structure and relationships in India- forms/types of family- based on organization, blood relationship, group affiliation, forms, authority, residence, descent
- 19. Pattern of changes in family structure and relationships in India -Familial (education and employment of women) and Extra Familial Factors (technology, peer group, society) responsible for the changes and consequences of these changes on the family life and society
- 20. Family life cycle- Definition, importance, stages and developmental tasks
- 21. Typical and alternative forms of families- Characteristics of Single parent families, female headed families, childless families, adoptive families, dual earner families, reasons behind alternative forms of family and its merits and demerits
- 22. Family Stress Definition, types/ categories of stressors, variables affecting family's response to stress
- 23. Family Stress- Causes of family stress, effects/ impact of family stress, manifestations/ recognizing symptoms of family stress, stress coping strategies, correlates of family stress
- 24. Family crises- Definition, when does stress becomes a crisis, hill's ABCX model of family crisis and conditions for crisis
- 25. Family Crisis- Stages of a crisis, characteristics of crisis events, effects of crises
- 26. Factors affecting crisis, adjustment to crisis, general things to do in times of crisis
- 27. Laws and Acts regarding marriage in India
- 28. Laws and Acts regarding adoption and divorce in India, Laws and Acts regarding inheritance in India
- 29. Marital Counseling nature, objectives and importance, types- premarital and marital, role of a marital counsellor
- 30. Premarital counseling- Need, premarital relationships and its consequences, sex education
- 31. Family life education- Concept, Types of family planning methods- Natural and Artificial methods
- 32. Family Counselling Interpersonal relationships and role conflict resolutions

Practical Outlines

- 1. Study on Hindu / Christian/ Muslim/ Parsi/ Jain marriage ceremonies
- 2. Study on gender roles and stereotypes
- 3. Study on Selection of partner
- 4. Study on perceptions related to premarital relationships
- 5. Visit to marriage bureau
- 6. Visit to Marriage and family counseling center
- 7. Visit to Family court
- 8. Comparative study on nuclear and joint families
- 9. Case study on atypical family
- 10. Case study of an alternative forms of family
- 11. Study on marital roles and adjustments
- 12. Study on families under Crisis
- 13. Study on families stress and its impact
- 14. Study on coping strategies adopted by families under Stress
- 15. Compilation and Presentation of reports
- 16. Preparation of resource file on latest laws and acts related to marriage and family

- 1. Ahuja, R. (2005). Indian social system. Rawat publication. Delhi.
- 2. Benokraitis.V.N. (2014). Marriage and families. 8th ed. Pearson publication.

- 3. Blood, R.O. (1969). Marriage. New York: The Free Press.
- 4. Goode, W.J. (1989). The family. New Delhi: Prentice Hall of India Private Limited.
- 5. Bryan Strong (1992). The Marriage and Family Experience. USA, West publishing company.
- **6.** Kapadia. K.M. (1966). Mariage and family in India. 3rded. Oxford university press, Kolkata.

Course Number	HDFS 221
Title	Developmental Challenges in Children
Credit Hours	3 (2+1)
General	To impact knowledge about special education, different types of
Objective	disabilities, etiology, classification, diagnosis, treatment and educational implications, rights and provisions, intervention programmes for children with different disabilities.
	Theory
Specific	By the end of the course, the student will be able to
Objectives	i. Understand the concept of Special Education
	ii. Learn different types of disabilities
	iii. Study the rights, provisions and intervention programmes of children with special needs
	Practical
	i. Learn how to identify children with special needs
	ii. Study the vocational and rehabilitation programmes for children with special needs
	iii. Understand planning, preparation and implementation of various activities for children with special needs

Theory Lecture outlines

- 1. Special needs and special education Concept and definition, Objectives of special education, Principles of special education, Types of special education services
- 2. History of special education Special education in different countries, The fall and the rise of special education, Influence of other disciplines, Development of special education in India
- Current trends and issues in special education Issues categorization, normative and non normative categories, selection and social problem classes, Integration, Dilemmas
- 4. Mainstreaming Concept, components, uniting factors, efficacy, issues in mainstreaming on children with special needs
- 5. Children with developmental challenges Concepts, types or classification of developmental challenges
- 6. Physical disabilities Orthopedic impairment Definition, types of Physical Disabilities, diagnosis and treatment
- 7. Physical disabilities Neuro-motor Impairment Concept, Causes, Types of Neuromotor impairments, Diagnosis and Treatment, educational considerations
- 8. Health Impairment Concept, causes, types, treatment, educational considerations
- 9. Intellectual impairment Mental Retardation Definition, classification, etiology of Mental Retardation, prevalence, characteristics, tests used
- 10. Down's syndrome- concept, causes, characteristics, associated problems, treatment therapies
- 11. Educational considerations and services for children with intellectual impairment
- 12. Learning Disabilities Concept, definition, prevalence, causes and diagnosis, types, characteristics, educational considerations for Learning Disabled
- 13. Slow learners- Characteristics, identification, educational considerations
- 14. Emotional Disorders Definition, Classification, Prevalence, Causes, Characteristics, problems associated with emotional disorders, treatment methods and educational considerations
- 15. Autism spectrum disorders Concept, causes, characteristics, diagnosis and

treatment, educational considerations

- 16. Attention Deficit Disorders, Attention Deficit Hyperactive disorders Definition, causes, symptoms, characteristics, treatment, educational strategies
- 17. Communication, Speech and Language Disorders Definition, Causes, Characteristics, Types
- 18. Communication, Speech and Language Disorders Educational considerations and managing Communication, Speech and Language Disabled children in school
- 19. Hearing Impairment Concepts, causes, classification, characteristics, diagnosis
- 20. Hearing Impairment Educational considerations and managing Hearing Impaired child in school
- 21. Visual Impairment Concept, causes, classification, characteristics of Visual Impairment, types of visual defects,
- 22. Visual Impairment -Educational considerations for Partially sighted and Blind
- 23. Giftedness Definition, prevalence, classification, characteristics, identification
- 24. Giftedness Educational considerations for gifted children aims, modifications in the learning environment, modifications of content, teaching cognitive strategies, role of teacher
- 25. Multiple and Severe Disabilities Concept of Severe Disabilities, characteristics, concept of Multiple Disabilities, characteristics, causes, diagnosis, implications
- 26. Rights and provisions for children with special needs in India
- 27. Organizations working for children with special needs
- 28. Intervention Concept, methods, process, Early Intervention Plan
- 29. Instructional methods and strategies used in intervention Instructional Methods -Enrichment, direct instruction, Incidental teaching, Activity based, Response contingent learning- Instructional Strategies - Shaping, chaining, prompting, cueing, extinction, timeout, restrain
- 30. Family centered intervention Concept, need and importance, Individualized Family Service Plan
- 31. Early intervention services for children with developmental challenges- types, service delivery approaches used in intervention
- 32. Roles and responsibilities of professionals in intervention

Practical Outlines

- 1. Observational visit to institutes for children with special needs Institute for Mentally challenged children
- 2. Observational visit to institutes for children with special needs Institute for Visually Impaired children
- 3. Observational visit to institutes for children with special needs Institute for Speech and Communication Disorder children
- 4. Observational visit to institutes for children with special needs Institute for Hearing Impaired children
- 5. Observational visit to institutes for children with special needs Institute for Orthopedically Impaired children
- 6. Observational visit to institutes for children with special needs Institute for Multiple Disabled children
- 7. Observational visits to Vocational & Rehabilitation center for developmentally challenged children
- 8. Observational visits to Vocational & Rehabilitation center for developmentally challenged children
- 9. Identification of children with developmental delays
- 10. Planning education programmes for families of children with special needs
- 11. Planning educational material for identification of disabilities
- 12. Preparation of educational material for identification of disabilities
- 13. Planning stimulation material for children with disabilities
- 14. Preparation of stimulation material for children with disabilities
- 15. Developing resource files on children with developmental challenges
- **16.** Final Practical Examination

- 1. Dash M. (2005). Education of Exceptional children. Atlantic Publications
- 2. Hallahan, D.P. and Kauffman, J.M. (1991). Introduction to exceptional children. 5th ed. Allyn and Bacon, Boston.
- 3. Jampala Madhubala, Digunarti Bhaskara Rao. (2004). Methods of teaching exceptional children. Discovery Publications House, Delhi.
- 4. Janet.W. Lerner, Barbara Lowenthal, Rosemary W. Egan. (2003). Preschool Education with special needs. Pearson Education.
- 5. Philip.L.Safford. (1989). Integrated Teaching in Early Childhood. Longman Inc.
- 6. Uttam Kumar Singh and A.K.Nayak. (1997). Special Education. Common Wealth Publications
- 7. Venkatesan.S. (2004). Children with developmental disabilities. Sage Publications, New Delhi.

Course Number	HDFS 311
Title	Family Counselling and Welfare
Credit Hours	3(2+1)
General	To impart knowledge about various aspects of Family Counselling and
Objective	Welfare
-	

Specific	Theory
Objectives	By the end of the course, the students will be able to
0	i. Know the history of counselling, concept, goal and scope of
	counselling, levels, classification, functions, principles and areas of counselling
	ii. Learn characteristics of counselor, counselling approaches, skills,
	problems and limitations in counselling
	iii. Know the role of millennium development goals on family
	welfare, situational analysis, current issues and challenges,
	constitutional provisions, legislations, policies related to children,
	youth, women, elderly

Practical

By the end of the course, the students will be able to

- i. plan and conduct counselling sessions to members of various age groups in family
- ii. study the organizations working for the welfare of children, youth, women and elderly

Theory Lecture outlines

- 1. History of counselling Before and after 20th century
- 2. Concept and nature of counselling-Meaning, nature of counselling
- 3. Goal and scope of counselling-Purpose, Goals and Objectives
- 4. Levels of counselling-Informal, Non Specialist counselling, Professional counselling
- 5. Classification of counselling-Based on time -Surface, Prolonged, Therapeutic; Based on relationship –Personal, Couple, workplace & Family
- 6. Functions of counselling-Adjustmental, Orientational and Developmental
- 7. Principles and need of family counselling
- 8. Thrust areas in family counselling- Educational, Vocational, Social, Health, Moral, , Personal, Premarital and Marital
- 9. Role of counselor and Characteristics of counselor –Personal & Professional
- 10. Counselling techniques-Directive/Counsellor centered, Non- directive/Client centered and Eclectic Counselling
- 11. Counselling approaches Insight theories-Psychoanalytic counselling, Gestalt counselling, Adlerian counselling; Action Theories –Behavioural counselling therapy, Rational Emotive Behaviour therapy (REBT)
- 12. Action Theories-Realty therapy, Expressive therapy, Family therapy and Strategic

counselling

- 13. Process of Counselling-Process, Conditions, Aspects, Dimensions and Fundamentals of counselling
- 14. Counselling skills-Diagnostic, Exploration, Relationship, Understanding, Action, Attending and Group process: Evaluation skills
- 15. Stages of counselling –Beginning phase, Middle phase and Ending phase
- 16. Problems and limitations in family counselling; Ethical Issues and dilemmas in counselling
- 17. Role of Millennium Development Goals on family welfare; UN Rights of children
- 18. Prevalence of children, youth, women and elderly, disabled and reserved category in India and in the world- Census
- 19. Current issues and challenges in child welfare child abuse, child labour, trafficking, neglect, Juvenile delinquency
- 20. Current issues and challenges in youth welfare delinquency, drug abuse, sexual abuse
- 21. Current issues and challenges in women welfare- trafficking, abuse, domestic violence, gender discrimination
- 22. Child welfare- definition and need, schemes, policies and programmes for children
- 23. Classification child Welfare services Residential services-Children's home, Adoption, SOS village, Foster care, Short stay home; Protective services-CGC,CGB, Child Line, Juvenile home
- 24. Classification child Welfare services- Recreational services Bal Bhavan, Holiday homes, Youth hostel
- 25. Women welfare- definition, need, services and schemes, policies and programmes for women
- 26. Youth welfare- definition, need, services and schemes, policies and programmes for youth
- 27. Elderly welfare- definition, need, services and schemes, policies and programmes for elderly
- 28. Welfare of disabled- definition, need, services and schemes
- 29. Policies and programmes for disabled
- 30. Reserved category welfare- definition, need, services and schemes
- 31. National organizations and agencies working for the welfare of children, women, youth, elderly and disabled:
- 32. International organizations and agencies working for the welfare of children, women, youth, elderly and disabled.

- 1. Visit to Family counselling center
- 2. Studying the areas of Family counselling
- 3. Identifying the needy areas and planning suitable counselling sessions for parents with infant babies
- 4. Identifying the needy areas and planning suitable counselling sessions for parents with preschoolers
- 5. Identifying the needy areas and planning suitable counselling sessions for parents with school age children
- 6. Identifying the needy areas and planning suitable counselling sessions for parents with adolescents
- 7. Identifying the needy areas and planning suitable counselling sessions for adult women
- 8. Identifying the needy areas and planning suitable counselling sessions for elderly
- 9. Visit to Children's home
- 10. Visit to Balbhavan
- 11. Visit to Child Guidance Bureau
- 12. Visit to SOS Village
- 13. Visit to State home
- 14. Visit to Child/Women protection Cell
- 15. Visit to Old age home

16. Final Practical Examination

References

- 1. Indira, M. (2000). Guidance & Counselling. New Delhi: Authors Press.
- 2. Narayana Rao, S. (1997). Counseling & Guidance. New Delhi: Tata Mc.
- 3. Paul Chowdary, D. (1985). Child Welfare & Development. Atmaram & Sons: Delhi Graw-Hill Publishing company Limited.
- 4. Srivastava, K.K. (2003). Principles of guidance & counseling). New Delhi: Kanishka Publishers.
- 5. Vasantha, R. P. (2001). Counselling Psychology.New Delhi: Authors Press.

Course Number Title Credit Hours General Objective	HDFS 321 Educational Psychology and Early Childhood Education 3(2+1) To impart knowledge about Educational Psychology, learning theories, learning traits, relationship of motivation with learning and performance, techniques of discipline and punishment in learning, different tests used in classroom evaluation, importance of Early Childhood Education, philosophies of ECE, steps and types of ECE programme planning, curriculum planning and activities to promote all round development of children during ECH period and roles and responsibilities of an early childhood personnel
Specific	Theory By the end of the course the students will be able to get the knowledge
Objectives	 about History of Educational Psychology and its importance, process of learning, different learning theories and learning traits, importance of motivation with learning and performance, techniques of discipline and punishment in learning and different tests used in classroom evaluation. Importance of Early Childhood Education, steps and types of ECE programme planning, curriculum planning and activities to promote all round development of children during ECH period, roles and responsibilities of an early childhood personnel.
	Practical
	 By end of the practical course the students Gain skills on analyzing effect of reinforcement, motivation, discipline on learning Get knowledge on application of different theories of classroom teaching Gain knowledge on administrating procedures of classroom evaluation tests Get an opportunity to observe the programme in ECE center Gain knowledge as well as skills required for planning and implementing programmes in early childhood education by using thematic approach Get practical knowledge on planning and preparation of suitable teaching learning materials used for preschool children.

Theory Lecture outlines

- 1. Educational psychology-Meaning, History, nature, aims of Educational Psychology, recent trends.
- 2. Learning- definition, concept, process, types and factors.

- 3. Learning traits- sensation, perception, imagination, attention: Definition, nature and importance.
- 4. Learning traits Memory meaning, types, disorders, signs of good memory; Remembering and forgetting - meaning and benefits of forgetting.
- 5. Learning traits Meaning of intelligence, definition, nature of intelligence, measurement of intelligence, factors affecting intelligence; Reasoning-definition, kinds of reasoning.
- 6. Learning traits Thinking-definition, types and forms of thinking; Temperamentmeaning and attributes of temperament.
- 7. Learning traits- problem solving, information processing learning environment-Problem solving- stages in problem solving, process in problem solving, human factors of problem solving; Information processing learning environment-Information- processing model of memory.
- 8. Theories of Learning: Association theories Trial and Error theory of learning or connectionism- Thorndike, Stimulus response theory by Watson
- 9. Theories of Learning: Association theories Classical conditioning theory- Pavlov, Operant conditioning theory by B.F.Skinner
- 10. Theories of Learning Cognitive theories Gestalt theory of learning characteristics and principles, Rober Gangne theory Hierarchical learning
- 11. Motivation-definition, classification or types of motivation, modes of motivationcontingency contract, token economy; Relationship of motivation with learning and performance-techniques of motivation in classroom learning.
- 12. Discipline- Meaning, need, functions, types or techniques of discipline, factors influencing choice of disciplinary techniques.
- 13. Learning theories of Jerome Bruner, Jean Piaget and Erik Erikson
- 14. Learning theories of Lev Vygotsky and Lawrence Kohlberg.
- 15. Meaning and ways of evaluation of student's performance-Introduction, steps of evaluation, types of evaluation.
- 16. Methods of evaluation Class room / teacher made tests and standardized tests Differences and tools of evaluation.
- 17. Early childhood education- Concept, Need and importance, objectives, history of early childhood education in India.
- 18. Early Childhood Care Centers Need for ECE centers and basic requirements for an ECE center, types of ECE centers.
- 19. Curriculum planning in ECE -Definition, types and steps of curriculum planning.
- 20. Curriculum planning in ECE-Characteristics and factors related to curriculum planning.
- 21. Bloom's taxonomy of Educational Objectives for curriculum planning-The cognitive domain, the affective domain, the psycho-motor domain.
- 22. Curriculum goals in ECE-Aims and objectives of curriculum goals and activities to promote all round development of children during ECH period.
- 23. Educational philosophies in ECE-Indian educators M.K.Gandhi, Tagore, Sri Aurobindo, Zakor Hussain, Jiddu Krishnamurthi, Tarabai Modak, Gijubhai Badeka.
- 24. Educational philosophies in ECE-Western educators Johann Amos commonius, Jean Jacques Rousseau, Henry Pestalozzi, Froebel, Maria Montessori, Susan Issacs .
- 25. The play-way method for ECE- Origin, selection, types, principles and advantages and its application to progressive teaching methods.
- 26. Play activities in ECE centers-Introduction, nature of play, purpose and functions, need and Importance of development of skills during Early Childhood.
- 27. Play activities in ECE centers different types of play activities and their values
- 28. Records and Reports maintained in ECE center-Values, types of records, techniques of collection of information and cumulative record,
- 29. Parental participation in the ECE programme need and importance and methods
- 30. Principles of teaching in ECE-General, Sociological and Psychological principles.
- 31. Classroom management in ECE- Principles, techniques and tips for effective classroom management.
- 32. Roles and responsibilities of an early childhood personnel Characteristics and qualities of a preschool teacher.
STUDENT READY PROGRAMME

VII GEMESTED		
READY- 411	Experiential Learning Programme	20(0+20)
	(Any 2modules out of 4 with 10 credits each)	_==(====)
Module -1	Event management	10 credits
Module - 2	Media products development for marketing promotion	10 credits
Module - 3	Nutraceuticals and health foods	10 credits
Module - 4	Value added textiles and Apparel	10 credits

Practical Outlines

- 1. Study on the effect of reinforcement on learning
- 2. Study on effect of motivation on learning
- 3. Study on effect of discipline on learning
- 4. Planning the different methods of classroom teaching
- 5. Implementing different methods of classroom teaching
- 6. Administering the classroom evaluation tests teacher made test
- 7. Administering the classroom evaluation tests standardized test
- 8. Observation of Programme in ECE center
- 9. Preparation of curriculum plans in ECE
- 10. Developing activities to promote all round development-Gross and fine motor skill, cognitive skills
- 11. Developing activities to promote all round development- language skills, creativity and socio emotional skills
- 12. Conducting developed activities to promote all round development- Gross and fine motor skill, cognitive skills
- 13. Conducting developed activities to promote all round development- language skills, creativity and socio emotional skills
- 14. Planning and preparation of suitable teaching learning materials used for preschool children
- 15. Organizing programme for Parent participation
- **16.** Final Practical Examination

References

- 1. Chauhan, S.S (1983). Advanced Educational Psychology. Vikas publishing house, PVT ltd.
- 2. Dash B.N.(2008). A text book of Educational Psychology. Dominant publishers and distributors, New Delhi.
- 3. Gupta, M.Sen (2009). Early Childhood Care and Education.PHI learning private limited, NewDelhi.
- 4. Mazur, J.E. (1986). Learning and behaviour. Prentice Hall, New Delhi.
- 5. Wortham, S.C (2012). Assessment in Early Childhood Education. Pearson.

Module -1 Event Management

STUDENT READY PROGRAMME		40(0+40))
VII SEMESTE	R		
READY- 411	Experiential Learning Programme	20(0+20))
	(Any 2modules out of 4 with 10 credits each)		
Module -1	Event management	10 credit	S
Module - 2	Media products development for marketing promotion	10 credit	S
Module - 3	Nutraceuticals and health foods	10 credit	S
Module - 4 Value added textiles and Apparel		10 credit	S
EL Activity		No. of Credits	Marks

Particulars	1 st month (30 days)	2 nd month 3 rd month			
Orientation	2 days				
Developing a business plan	3 days				
Training in Advance Skills	25* days				
Plan for production	3 days				
Production		55 days			
Sales					
Documentation and reports				5 days	
Presentation and oral				2 days	
examination					
Orientation					
Developing a Business Plan/ Project proposal			1	50	
Identification of the product to be manufactured, Market Survey, Analysis of the					
existing status of the identified product and targeted market and customer,					
Innovativeness and Creativity, Preparation of the project proposal with supply chain					
of inputs, personnel plan, produ	uction plan, finance pla	n etc. and its prepara	tion		
Plan for the Production					
Organization of resources, Or	rganizing Utility, Sequ	ential grouping of	activities,	1	50
Packaging and storage, Produc	t pricing physical input	s, man hours, deprec	iation etc.		
Production				5	250
Regularity in production, Adhe	ering to production pla	n, Product quality as	ssessment,		
Maintenance of production rec	ords, Team work				
Sales			2	100	
Sales strategy, sales strategy, s	ales volumes, assessme	ent of sales performation	nce, profit		
generated including C/B ratio,	payback period, etc.				
Documentation and Report P	resentation and Evalu	uation		1	50
Total Credit				10	500

Module – 2 Media products development for marketing promotion

Particulars	First	Second	Third
Orientation	2 days		
Developing business plan		Market survey and	
		analysis	
Training in advance skills	• Content develop		
	• Web development and promotion for		
	higher rating		
	• Social media designing, development and		
	management		

	 Social marketing campaigns Enterprise planning and management training 		
Plan for the production	Business plan, production		
Sales			Marketing
Documentation and reports			Collection of metrics
			and ratings
Presentation and oral			Evaluation-Presentation
examination			and Viva

EL Activity	No. of Credits	Marks
Orientation	Cicuits	
Developing a Business Plan/ Project proposal	1	50
Identification of the product to be manufactured, Market Survey, Analysis of the		
existing status of the identified product and targeted market and customer,		
Innovativeness and Creativity, Preparation of the project proposal with supply chain		
of inputs, personnel plan, production plan, finance plan etc. And its preparation		
Plan for the Production		
Organization of resources, Organizing Utility, Sequential grouping of activities,	1	50
Packaging and storage, Product pricing physical inputs, man hours, depreciation etc.		
Production	5	250
Regularity in production, Adhering to production plan, Product quality assessment,		
Maintenance of production records, Team work		
Sales	2	100
Sales strategy, sales strategy, sales volumes, assessment of sales performance, profit		
generated including C/B ratio, payback period, etc.		
Documentation and Report Presentation and Evaluation		50
Total Credit	10	500

Module - 3 Nutraceuticals and Health foods (Millet Biscuits

Particulars	1 st month	2 nd month	3 rd month
Orientation	Orientation - 2 days		
Developing a Business plan	Business plan - 1 day		
Training in Advance Skills	Hands on training - 5 days		
Plan for the production	Raw material procurement – 2 days	Machine Calibration Procuring raw material 2 days	Machine Calibration Procuring raw material 2 days
Production	Pre preparation - 3 days Production of biscuits – 14 Days Packing - 2 days	Pre preparation - 9 days Production of biscuits - 17 days	Pre preparation 9 days Production of biscuits 16 days
Sales	Bulk supply of biscuits – 1 day	Bulk supply of biscuits – 1 day	Bulk supply of biscuits – 1 day

Documentation and Reports		Documentation - 1day Report writing - 2 days
Presentation and Oral Examination	 	Presentation and VIVA - 1 day

EL Activity	No. Of Credits	Marks
Orientation		
Developing a Business Plan/ Project proposal	1	50
Identification of the product to be manufactured, Market Survey, Analysis		
of the existing status of the identified product and targeted market and		
customer, Innovativeness and Creativity, Preparation of the project		
proposal with supply chain of inputs, personnel plan, production plan,		
finance plan etc. And its preparation		
Plan for the Production		
Organization of resources, Organizing Utility, Sequential grouping of	1	50
activities, Packaging and storage, Product pricing physical inputs, man		
hours, depreciation etc.		
Production	5	250
Regularity in production, Adhering to production plan, Product quality		
assessment, Maintenance of production records, Team work		
Sales	2	100
Sales strategy, sales strategy, sales volumes, assessment of sales		
performance, profit generated including C/B ratio, payback period, etc.		
Documentation and Report Presentation and Evaluation	1	50
Total Credit	10	500

Module – 4 Value added textiles & apparel

Particulars	1st Mo	onth	2 nd	3 rd Month	ı
			Month		
Orientation	2 days				
Developing a Business plan	3 days				
Training in Advance Skills					
Plan for the production	2 days				
Production			60 days		
Sales					
Documentation and Reports					7 days
Presentation and Oral Examination					7 days

EL Activity	No. of Credits	Marks
Orientation	0100105	
Developing a Business Plan/ Project proposal	1	50
Identification of the product to be manufactured, Market Survey, Analysis of the existing status of the identified product and targeted market and customer, Innovativeness and Creativity, Preparation of the project proposal with supply chain of inputs, personnel plan, production plan, finance plan etc. And its preparation		
Plan for the Production		
Organization of resources, Organizing Utility, Sequential grouping of activities, Packaging and storage, Product pricing physical inputs, man hours, depreciation etc.	1	50

Production	5	250
Regularity in production, Adhering to production plan, Product quality		
assessment, Maintenance of production records, Team work		
Sales	2	100
Sales strategy, sales strategy, sales volumes, assessment of sales performance,		
profit generated including C/B ratio, payback period, etc.		
Documentation and Report Presentation and Evaluation	1	50
Total Credit	10	500

VIII SEMESTER		
READY-421	RAWE	10(0+10)
READY-422	Skill Development Training/Internship	10(0+10)
	Total	20(0+20)