

MAA PATESWARI UNIVERSITY BALRAMPUR

B.A Home Science

Faculty of Arts



Syllabus Structure CBCS (NEP)

B.A. HOME SCIENCE



Maa Pateswari University, Balrampur.

Syllabus Developed/Proposed by				
S. No.	Name of Expert/BOS Member	Designation	Department	College/ University
1.	Prof. Ashok Kumar	Convener	Department of Zoology	M.L.K PG College, Balrampur
2.	Dr. Sadguru Prakash	Member	Department of Zoology	M.L.K PG College, Balrampur
3.	Dr. Abhinav Singh	Member	Department of Zoology	AND Kisan P.G. College, Babhnan, Gonda
4	Dr. Neelam Chaurasia	Member	Department of Home Science	Rajkeeya Mahavidyalaya, Biloha, Gainsari, Balrampur
5.	Shri Shishir Tripathi	Member	Department of Zoology	L.B.S.PG College Gonda
6.	Prof. Vinay Kumar Singh	Member	Department of Zoology	D D U Gorakhpur University
7.	Dr. Ashutosh Srivastava	Member	Department of Zoology	Siddharth University, Kapilvastu, Siddharth Nagar
8.	Prof. Arvind Kumar Sharma	Member	Department of Zoology	K.S. Saket P.G. College, Ayodhya

Semester-wise distribution of Courses and Credits

(B.A. Home Science as one Major Subject)

Year	Course Code	Paper Title	Theory/Practical (Marks)	Credits
B.A. Ist YEAR	Semester I			
	A120101T	Fundamentals of Nutrition and Human Development	Theory - 100 (75 + 25)	4
	A120102P	Cooking Skills and Healthy Recipe Development	Practical (100)	2
	Semester II			
	A120201T	Introduction to Clothing and Textile & Family Resource Management	Theory- 100 (75 + 25)	4
	A120202P	Clothing and Textile	Practical (100)	2
B.A. IInd YEAR	Semester III			
	A120301T	Advance Nutrition and Human Development.	Theory- 100 (75 + 25)	4
	A120302P	Human Development.	Practical (100)	2
	Total Credits			6
	Semester IV			
	A120401T	Housing and Extension Education	Theory- 100 (75 + 25)	4
	A120402P	Resource Planning and Decoration.	Practical (100)	2
	Total Credits			6
B.A. IIIrd YEAR	Semester V			
	A120501T	Surface Ornamentation of Fabrics.	Theory- 100 (75 + 25)	6
	A120502T	Community Development and Programme Planning	Theory- 100 (75 + 25)	4
	A120503P	Community Transformation (Change)	Practical (100)	2
	Semester VI			
	A120601T	Dietetics & Therapeutic Nutrition	Theory- 100 (75 + 25)	4
	A120602T	Research Methodology and Gender Development	Theory- 100 (75 + 25)	6
	A120603P	Therapeutic Diet Preparation & Nutrient Evaluation	Practical (100)	2
B.A. IVth YEAR Honours	Semester VII			
	A120701T	Research Methods and Statistics	Theory- 100 (75 + 25)	4
	A120702T	Advance Food Science	Theory- 100 (75 + 25)	4
	A120703T	Child Development	Theory- 100 (75 + 25)	4
	A120704T	Fundamentals of Clothing and Textiles	Theory- 100 (75 + 25)	4
	A120705P	Practical (based on paper I, II, III, IV)	100	4

Semester VIII				
	A120801T	Energy Management and Household Equipment	Theory- 100 (75 + 25)	4
	A120802T	Extension Techniques and Programmes	Theory- 100 (75 + 25)	4
	A120803T	Community Nutrition	Theory- 100 (75 + 25)	4
	A120804T	Ergonomics	Theory- 100 (75 + 25)	4
	A120805P	Practical (based on paper I, II, III, IV)	100	4

- Subjects with Practical - 25 Marks for Int. Assessment + 25 Marks Ext. Practical Exam + 75 Marks Theory Paper.
- Subjects without Practical – 25 Marks for Int. Assessment + 75 Marks Theory paper.

Proposed Year-wise structure of UG Program in Home Science

Program Outcomes (POs)

- ❖ The program is designed to provide students with a high-quality, practical education that addresses all aspects of the human life cycle.
- ❖ It was developed to improve students, ability to understand universal and objective values in the Home Science.
- ❖ Student gain scientific and practical mindset from the program, aiding them in their everyday lives.
- ❖ Develop the ability to solve complex problems and find connections between personal, community and national priorities. Encourage research, innovation, and designing across all areas of home science.

Certificates in Fundamentals of Home Science

B.A. First Year

Program Specific Outcomes (PSOs)

At the end of the program following outcomes are expected from students:

- ❖ Learn about the discipline of Home Science as a holistic field of study covering and requirements of human beings in day-to-day living, for example, achieving appropriate milestones in personal development; awareness, need and use of family resources; access to adequate nutrition for wholesome development; clothing fundamentals.
- ❖ Strategic advancement in the domain of Nutrition and Textiles can be leveraged for economic gain.

Semester I	Name of Paper	Credits	Lectures
	Fundamentals of Nutrition and Human Development (Theory)	4	60
	Cooking Skills and Healthy Recipe Development (Practical)	2	30
	Total	6	90
Semester II	Name of Paper	Credits	Lectures
	Introduction to Clothing and Textile & Family Resource Management (Theory)	4	60
	Clothing and Textile (Practical)	2	30
	Total	6	90

**B.A. Second Year
Diploma in Interior Design and Human Development**

Program Specific Outcomes (PSOs)

At the end of program following outcomes are expected from students:

- ❖ Develop sensitivity, resourcefulness, and competence to render service to enhance development of individuals, families, communities, and the nation at large.
- ❖ Enhance abilities involved in acting as proactive agents of change in promoting the discipline of Family and Community Sciences.
- ❖ Explore and decide upon viable avenues of self-employment and entrepreneurship.
- ❖ Learn more about human and community & relationship

Semester IV	Name of the Paper	Credits	Lectures
	Advance Nutrition and Human Development	4	60
	Human Development (Practical)	2	30
	Total	6	90
Semester V	Name of the Paper	Credits	Lectures
	Housing and Extension Education (Theory)	4	60
	Resource Planning and Decoration (Practical)	2	30
	Total	6	90

**B.A. Third Year
Degree in Bachelor of ARTS**

Program Specific Outcomes (PSOs)

At the end of program following outcomes are expected from students:

- ❖ The Programme is designed to encourage the students to be responsible for Learning and Entrepreneurship, and make the students skilled with holistic approaches.
- ❖ Promote research, innovation and design (product) development favouring all the disciplines in Home Science.
- ❖ Enhance digital literacy and apply them to engage in real time problem solving and ideation related to all fields of Home Science.
- ❖ Learn and get the advantage from the inter-related five core disciplines of Home Science- Resource

Management, Food Science and Nutrition, Textiles and Clothing, Human Development and Family Studies, Extension and Communication.

- ❖ With the completion of this Course, students can be benefitted by getting various jobs in different field like- government sector, working with NGOs, jobs as an extension worker, education etc.

Semester- V	Name of the Paper	Credits	Lectures
	Surface Ornamentation of Fabrics	6	90
	Community Development and Programme Planning (Theory)	4	60
	Community Transformation (Practical)	2	30
	Total	12	120
Semester- VI	Name of the Paper	Credits	Lectures
	Dietetics and Therapeutic Nutrition (Theory)	6	90
	Research Methodology and Gender Development (Theory)	4	60
	Therapeutic Diet Preparation and Nutrient Evaluation (Practical)	2	30
	Total	12	120

B.A. First Year Semester I Home Science
Paper 1- Fundamentals of Nutrition and Human Development (Theory)

Programme/ Class: Certificate		Year: 1 st	Semester: 1 st
Subject: HOME SCIENCE			
Couse Code: A120101T		Course Title: Fundamentals of Nutrition and Human Development (Theory)	
Credit: 3		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: The student at the completion of the course will be able to: <ul style="list-style-type: none">• Prepare the students to understand courses based on physiology.• Students will get familiar with different methods of cooking• Students will get to know about the practical knowledge of nutrient rich foods.• Explain the need and importance of studying human growth and development across life span.• Identify the biological and environmental factors that affect the human development. Learn about the characteristics, needs and developmental tasks of infancy & early childhood years.			
UNIT	TOPIC		No. of Lectures
PART- A			
I	<ul style="list-style-type: none">• Traditional Home Science and its Relevance in current era.• Contribution made by Indian Home Scientists i.e. M Swaminathan, C V Gopalan, S K Day & Ravindra Nath Tagore		03
II	<ul style="list-style-type: none">• Structure and function of Digestive System.• Respiratory and Cardiovascular System		10
III	<ul style="list-style-type: none">• Food and Nutrition• Food-Meaning, Classification and function.• Nutrition- Concept of Nutrition• Nutrients-Macro and Micro, sources and deficiency diseases		09
IV	<ul style="list-style-type: none">• Cooking Methods- Methods, Advantages and Disadvantages.• Preservation of Nutrients while Cooking.• Food preservation and storage.• Food adulteration, methods to increase the nutrients value of food		08
PART- B			
V	Introduction to Human Development: <ul style="list-style-type: none">a. Concept, Definition of Human Developmentb. Domains and Stages of development.c. Principles of Growth and Development.		08
VI	Prenatal Development and Birth Process: <ul style="list-style-type: none">a. Conception, Pregnancy and Childbirth, Stages of birth.		06

	b. Types of delivery (Natural, C-section, Breech, Home vs. Assisted delivery). c. Factors affecting Pre-natal development. d. Parenting style.	
VII	Infancy: a. Developmental tasks during Infancy and Preschool Stage. b. Physical and Motor Development. c. Social and emotional development. d. Cognitive and language development.	08
VIII	Early Childhood (Pre School) years: a. Developmental Tasks during Early childhood. b. Physical and Motor Development. c. Social and emotional development. d. Cognitive and language development.	08

Suggested Readings:

1. Dr. Brinda Singh, Manav Sharir evam Kriya Vigyan, Panchsheel Prakashan, Jaipur; 2015; 15th Ed.
2. Chatterjee. C. C, "Human Physiology" Medical Allied Agency; Vol. I, II.
3. Textbook of Biology for (10+2) Students (NCERT)
4. Sumati R Mudami, "Fundamentals of Food Nutrition and Diet Therapy", New Age International Pvt. Ltd, New Delhi, 6th Ed. (2018)
5. Punita Sethi and Poonam Lakda, "Aahar Vigyan, Suraksha evam Poshan"; Elite Publishing House, New Delhi ;2015
6. Dr. Anita Singh, Aahar Evam Poshan Vigyan, Star Publications, Agra
7. Dr. Devina Sahai, Aahar Vigyan, New Age International Publishers, New Delhi
8. Berk L. E. *Child development* New Delhi : Prentice Hall (2005) (5th Ed.).
9. Berk L. E. *Child Development* Allyn and Bacon, 1992, 6th Edition.
10. Khanuja, Reena (2018) Grah Vyavastha avam Grah Sajja. Agrawal Publications, Agra
11. ISBN: 978-93-81124-96-3

Suggestive digital platforms web links-

1. e-PG- Pathshala, IGNOU & UPRTOU online study material.
2. Svayam Portal <http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. First Year Semester I Home Science
Paper 2- Cooking Skills and Healthy Recipe Development (Practical)

Programme/ Class: Certificate

Year: 1st

Semester: 1st

Subject: HOME SCIENCE

Couse Code: A120102P

Course Title: Cooking Skills and Healthy Recipe Development (Practical)

Credit: 2

Core Compulsory/ Elective

Marks:25

Min. Passing Marks:

No. of Lectures: 30 (60 hours)

Course Outcomes:

- Students will get familiar with different methods of cooking.
- Acquaint students with practical knowledge of nutrient rich foods

UNIT	TOPIC	No. of Lectures
I	Basic cooking skills: <ul style="list-style-type: none"> a. Weighing of raw materials. b. Preparing of different food items before cooking. c. Design the menu card. 	06
II	Preparation of various dishes using different methods of cooking and food preservation: <ul style="list-style-type: none"> a. Boiling b. Steaming c. Roasting d. Frying- Deep/shallow e. Pressure cooking f. Hot air cooking/Baking. g. Pickling, jam, jellies and murabba preparation 	08
III	<ul style="list-style-type: none"> • Different styles of cutting fruits and vegetables. • Salad Decoration/ Dressings. 	06
IV	Preparation of nutrient-rich dishes <ul style="list-style-type: none"> a. Protein rich dish b. Carbohydrate rich dish c. Fat rich dish d. Vitamins rich dish e. Minerals f. Fibers 	10

Suggested Readings:

1. Dr. Brinda Singh, Manav Sharir evam Kriya Vigyan, Panchsheel Prakashan, Jaipur; 2015; 15thEd.
2. Dr. Nitu Singh, Prayogik Grih Vigyan, Sahitya Prakashan, Agra
3. Chatterjee, C. C, "Human Physiology" Medical Allied Agency; Voll. II.
4. Sumati R Mudami, "Fundamentals of food Nutritionand Diet Therapy", New Age International Pvt. Ltd, New Delhi, 6th Ed. (2018)
5. Punita Sethi and Poonam Lakda, "Aahar Vigyan, Surakshaevam Poshan"; Elite Publishing House, New Delhi; 2015

Suggested equivalent online courses:

IGNOU and other centrally/state operated universities/MOOC platforms such as “SWAYAM” in India and abroad.

<http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.**
- b. Test with multiple choice questions/ short and long answer questions.**
- c. Attendance.**

This course can be opted as an elective by the students of following subjects: Open for all

The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. First Year Semester 2 Home Science
Paper 1- Introduction to Clothing & Textiles & Family Resource Management (Theory)

Programme/ Class: Certificate		Year: 1 st	Semester: 2 nd
Subject: HOME SCIENCE			
Couse Code: A120201T		Course Title: Introduction to Clothing & Textiles & Family Resource Management (Theory)	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: <ul style="list-style-type: none">• Learn about scopes of textile and clothing.• Understand why fabrics are different.• Learn how fabrics can be manufactured.• Understand basic clothing concepts and preparation of the garments.• Learn the family resource management as a whole.• Understand the Decision making and use of resources throughout the Family life cycle.• Gain knowledge about the 3 important resources- Time, Energy and Money.• Understand the Household Equipments for work simplification.			
UNIT	TOPIC		No. of Lectures
PART- A			
I	Introduction: <ul style="list-style-type: none">a. Introduction to Clothing and Textile and Scope.b. Classification of textile fiber on the basis of their source.c. Primary and secondary characterized dietetics of fibers.		07
II	Knowing Fibers: Manufacture, processing, properties and uses of <ul style="list-style-type: none">a. Cellulosic Fibers-cotton, Linen.b. Protein Fibers-Wool, Silk.c. Synthetic/Manmade fibers- Nylon, Polyester, Acrylic, Rayon.		08
III	Yarn to Fabrics: <ul style="list-style-type: none">a. Definition of Yarn, Manufacture of Yarn and Yarn Properties.b. Weaving of Cloth-Terminologies and Steps in Weaving.c. Types of weaves-Basic and Decorative.		08
IV	Clothing Construction: <ul style="list-style-type: none">a. Tools for Clothing construction.b. Introduction to sewing machines, its parts and maintenance.c. Importance of Drafting, Draping, Flat pattern techniques-advantages & disadvantages.d. Fabric preparatory steps for stitching a garment - preshrinking, straightening, layout, pinning, marking and cutting.		07
PART- B			

V	Introduction to Home Management: <ol style="list-style-type: none"> Basic Concepts, Purpose and Obstacles of Management. Process of Management–Planning, Organizing, Controlling and Evaluation. Motivating Factors in Management– Values, Goals and Standards – Definition and Classification 	08
VI	Resources, Decision making & Family life cycle: <ol style="list-style-type: none"> Meaning, Characteristics, Types and Factors affecting the use of Resources. Steps and Role of Decision Making in Management. Stages of Family Life Cycle. 	06
VII	Time, Energy and Money Management: <ol style="list-style-type: none"> Time as a Resource, Steps in making Time Plan, Tools and Aids in Time Management. Energy as a Resource, Work Curve, Fatigue-Types Causative Factor and Alleviating Techniques. Family income as a Resource, Sources of Income and Expenditure and Saving. Preparation of Family budget in view of family income 	09
VIII	Work Simplification and Household Equipments: <ol style="list-style-type: none"> Meaning and techniques of Work Simplification, Mundell’s classes of change. Principle. Use and Care of Household equipments such as Pressure Cooker, Mixer. Grinder, Refrigerator, Washing Machine, Vacuum Cleaner, air fryer, microwave& Solar Cooker 	07

Suggested Readings:

1. Colbmen P Bernard: Textiles Fiber to Fabric
2. Hollen & Saddler: Introduction to Textile
3. Joseph M: Introduction to Textiles
4. Khanuja, Reena (2018) Grah Vyavastha avam Grah Sajja. Agrawal Publications, Agra ISBN:978-93- 81124-96-3
5. R Bhatia & C Arora (1999), Introduction to Clothing and Textile, Printed by Macho Printery, Raopura, Baroda.
6. Complete Guide to Sewing by Reader’s Digest: Published by The Reader’s Digest Association (Canada) Ltd. Montreal-Pleasantville, NY, 2002.
7. Deacon R. E. and Firebaugh F.M. (1998) Family Resource Management- Principles and application. N. Delhi.: Roy Houghton Mifflin Company
8. Faulkner, R.& Faulkner, S. (1961) Inside Today’s Home. Revised. © Holt, Rinehart & Winston, Inc.
9. Gross, I.H. and Crandall, E.H. (1967). Management for Modern Families. N. Delhi: Sterling Publishers Ltd
10. Moorthy G. (Ed.). (1985). Home Management. N. Delhi.: Arya Publishers, Mullick, P. Textbook of Home science. Ludhiana.: Kalyani Publishers.
11. Patni Manju & Sharma Lalita, Grah Prabandh, Star Publications Agra.
12. Varma, Pramila. Vastra Vigyaan Avam Paridhan: Madhya Pradesh Hindi Granth Academy, Bhopal.
13. Varghese, M.A. Household Equipment Manual, S.N.D.T Women’s University, Mumbai.

Suggestive digital platforms:

Weblinks- Svayam Portal, <http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

**B.A. First Year Semester 2 Home Science
Paper 2- Clothing & Textiles (Practical)**

Programme/ Class: Certificate		Year: 1 st	Semester: 2 nd
Subject: HOME SCIENCE			
Couse Code: A120202P		Course Title: Clothing & Textiles (Practical)	
Credit: 2		Core Compulsory/ Elective	
Marks: 25		Min. Passing Marks:	
No. of Lectures: 30 (60 hours)			
Course Outcomes: <ul style="list-style-type: none">• Ability to identify fibers and fabrics.• Understanding why fabrics are different.• Learning basic Sewing skills.• Learn how garments are stitched.			
UNIT	TOPIC		No. of Lectures
I	Identify fibers and fabrics <ul style="list-style-type: none">a. Fiber identification tests-Visual burning and microscopic-natural and synthetic Pure and blended fibers.b. Weaves identification and understanding their usage.		07
II	Learning to stitch: <ul style="list-style-type: none">a. Knowing the functions of various parts of sewing machine and troubleshooting of major problems during stitching.b. How to stitch-an idea of straight-line stitching, stitching on curves and at corners.c. Basic Stitching-Temporary Stitching, Permanent and decorative stitching.		07
III	Basic sewing: <ul style="list-style-type: none">a. Seams-Plain seams and its finishing, run & fell seam, French seamb. Attaching different Fastenersc. Disposal of fullness-darts, gathers, tucks and pleats.d. Neckline Finishing-Facing & Binding.		08
IV	Visit: <ul style="list-style-type: none">a. Visit to garment factory/Industry/Apparel unit /Silai Kendra to gain awareness on various types of sewing machines, manufacturing processes like drafting, finishing and packing.b. Report writing.		08
Suggested Readings: <ul style="list-style-type: none">1. Cutting Tailoring and Dress Making: National open School, B-31-B Kailash Colony, New Delhi – 1100048.2. R Bhatia & C Arora (1999), Introduction to Clothing and Textile, Printed by Macho Printery, Raopura, Baroda.3. Complete Guide to Sewing by Reader’s Digest: published by The Reader’s Digest Association (Canada) Ltd. Montreal-Pleasantville, NY, 2002.4. Helen J Armstrong, Pattern Making for Fashion Design, Prentice Hall5. Gerry Cooklin, Introduction to Clothing Manufacture, Blackwell Science, UK, 1991			

6. **Metric Pattern cutting & Grading by Winfred Aldrich.**
7. **Khanuja, Reena. Vastra Vigyan ke Sidhant, Agrawal Publication, Agra.**

Suggestive digital platforms web links-

Svayam Portal- <http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- a. **Preparation of samples of various types on fabrics.**
- b. **Evaluation of Prepared garment.**
- c. **Record file preparation and evaluation.**
- d. **Attendance.**

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Second Year Semester 3 Home Science
Paper 1- Advance Nutrition and Human Development (Theory)

Programme/ Class: Certificate		Year: 2 nd	Semester: 3 rd
Subject: HOME SCIENCE			
Couse Code: A120301T		Course Title: Advance Nutrition and Human Development (Theory)	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: <ul style="list-style-type: none">• Spread awareness regarding the healthy meal at various stages of life.• Inculcate the healthy eating practices among themselves.• Capable of planning a meal chart for different physiological groups.• Identify the various external factors which affect the personality.• Learn about the developmental tasks and needs at the Middle school age, adolescence and adulthood			
UNIT	TOPIC		No. of Lectures
PART- A			
I	Meal Planning- Definition, importance, factors affecting meal planning, Balanced Diet, RDA.		07
II	Nutrition During Infancy and Childhood- Nutrition Requirement, RDA and Diet Plan.		07
III	Nutrition During Adolescence, Adulthood and Old Age- Nutrition Requirement, RDA and Diet Plan.		08
IV	Nutrition During special condition- Pregnancy and lactation- nutrition Requirement, RDA and Diet Plan		08
PART- B			
V	Middle Childhood Years: <ul style="list-style-type: none">a. Developmental tasks and characteristics of middle childhood period.b. Physical and motor development.c. Social & emotional development.d. Cognitive development.e. Language development		08
VI	Puberty and Adolescence: <ul style="list-style-type: none">a. Development tasks and characteristics.b. Significant Physical physiological and hormonal changes in puberty.c. Family and peer relationship.d. Problems – Drug and Alcohol abuse, STD, HIV/AIDS, Teenage pregnancy.		08

VII	Cognitive, Language and Moral Development during Adolescence: <ol style="list-style-type: none"> Perspective on cognitive development, development of intelligence and Creativity. Adolescent Morality. 	07
VIII	Adulthood: <ol style="list-style-type: none"> Concept, transition from adolescence to adulthood. Developmental tasks of Adulthood. Physical and physiological changes from young adulthood to late adulthood. Responsibilities and adjustments-educational, occupational, marital and parenthood. 	07

Suggested Readings:

1. Sheel Sharma, "Nutrition and Diet Therapy, Peepee Publishers, New Delhi; 2014
2. Ankita Gupta "Text book of Nutrition" Medico Refresher Publisher, Agra, 2018.
3. Subhangini A Joshi; Nutrition and Dietetics, Mc Graw Hill Education, Private Ltd.
4. Kumud Khanna, "Text book of Nutrition and Dietetics", Elite Publishing House Pvt. Ltd, New Delhi, 2013, 7th Ed.
5. Swaminathan M, " Essentials of Food and Nutrition Vol I and II.
6. Monaster G.J. 1 Adolescent Development Life Tasks. Mc.Graw Hill (1977).
7. Ambron S.R. Child Development Holt, Rinehart and Winston 1978 (2nd Edition).
8. Mussen P.H. Conger J.J. Kagan J and Huston A.C. 1990. Child Development and Personality (VI Edition) Harper and Row Publishers New York.
9. Boeknek G. Human Development Brook and Cole Publishing Company 1980.
10. Aadhunik Vikasatmak Manovigyan , Shri Vinod Pustak Mandir Agra Edition 3rd 2015.
11. Harpalani. Aahar Vigyaan avam Upcharatmak Poshan, Star Publications, Agra.

Suggestive digital platforms web links-

1. IGNOU & UPRTOU online study material Svayam Portal.
2. <http://heecontent.upsdc.gov.in/Home.aspx>

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- Test with multiple choice questions/ short and long answer questions.
- Attendance.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

**B.A. Second Year Semester 3 Home Science
Paper 2- Human Development (Practical)**

Programme/ Class: Certificate		Year: 2 nd	Semester: 3 rd
Subject: HOME SCIENCE			
Couse Code: A120302P		Course Title: Human Development (Practical)	
Credit: 2		Core Compulsory/ Elective	
Marks: 25		Min. Passing Marks:	
No. of Lectures: 30 (60 hours)			
Course Outcomes: <ul style="list-style-type: none">• Learn to cope up with adolescent and adulthood problems.• Understand and handle development related issues more efficiently.• Able to know human behaviour.• Understand individual differences.			
UNIT	TOPIC		No. of Lectures
I	<ul style="list-style-type: none">• Preparation of an album on developmental milestones of children.• Prepare child literature.• Visit to Child Care Centres/ Anganwadi.		08
II	<ul style="list-style-type: none">• Study of physical, social, emotional, cognitive, language development (any two).• Observations of child rearing practices in families from different social classes.		08
III	Interviews of adolescent girls and boys to understand their life style, behaviour and problems.		07
IV	Carry out case studies to know more about the different life stages, e.g., school going children, adolescents, young adults. (any two)		07
Suggested Readings: <ul style="list-style-type: none">1. Monaster G.J. 1 Adolescent Development Life Tasks. Mc.Graw Hill (1977).2. Ambron S.R. Child Development Holt, Renhart and Winston 1978 (2nd Edition).3. Mussen P.H. Conger J.J. Kagan J and Huston A.C. 1990. Child Development and Personality (VI Edition) Harper and Row Publishers New York.4. Boeknek G. Human Development Brook and Cole Publishing Company 1980.5. Aadhunik Vikasatmak Manovigyan, Shri Vinod Pustak Mandir Agra Edition 3rd 2015.			
Suggestive digital platforms web links- <ul style="list-style-type: none">1. ePG- Pathshala2. inflibnet3. IGNOU & UPRTOU online study material.4. Svayam Portal- http://heecontent.upsdc.gov.in/Home.aspx			
Suggested Continuous Evaluation Methods: <ul style="list-style-type: none">a. Assessment of observation report.b. Preparation of questionnaire.c. Attendance.d. Visits Records.			

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Second Year Semester 4 Home Science
Paper 1- Housing & Extension Education (Theory)

Programme/ Class: Certificate		Year: 2 nd	Semester: 4 th
Subject: HOME SCIENCE			
Couse Code: A120401T		Course Title: Housing & Extension Education (Theory)	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: <ul style="list-style-type: none">• Understand the Housing Needs and able to do selection of site in real life situations.• Able to comprehend the Housing Plans for residential purposes.• Learn the widening concept of Extension Education.• Enhance the Communication skills and make the communication methods effective.• Gain the skill to use the advanced audio-visuals aids.			
UNIT	TOPIC		No. of Lectures
PART- A			
I	Housing: <ul style="list-style-type: none">a. Needs of a House, way to acquire house (Own & rented).b. Factors influencing selection and purchase of house and site for house building.		08
II	House Planning: <ul style="list-style-type: none">a. Principles of house planning.b. Planning different residential spaces in a house.c. Planning house for different income groups.		07
III	Interior Designing: <ul style="list-style-type: none">a. Introduction to Interior designing- Objective of Interior decoration.b. Elements of design – Line, Shape, Texture, Color, Pattern, Light & Space.c. Principle of design- Proportion, Balance, Rhythm, Emphasis, Harmony.		08
IV	Home Decors: <ul style="list-style-type: none">a. Furniture, Furnishings (Curtain, Draperies, Floor coverings).b. Wall ceiling, Lighting, Accessories (Wall painting, Mirrors, wall art, Sculpture & Antiques, Flower arrangements) etc.		07
PART- B			
V	Extension Education: <ul style="list-style-type: none">a. Meaning, Concepts, Objectives, Scope.b. Principles, Philosophy of Extension Education.c. Formal & Non-formal Education.d. Early Extension Efforts in India.		08

VI	Extension Teaching & Learning: a. Role and Qualities of an Extension workers. b. Steps in Extension Teaching Process. c. Criteria for Effective Teaching & Learning	07
VII	Communication & Extension Teaching Methods: a. Definition, Importance, Characteristics. b. Elements, Models & Challenges in communications. c. Extension Teaching Methods- Classification. d. Factors guiding the Selection & use of Extension teaching methods.	08
VIII	Audio- visual Aids: a. Definition, Importance, Classification and Selection. b. Preparation & Effective use of Audio-visual Aids.	07

Suggested Readings:

1. Khanuja, Reena (2018) Grah Vyavastha avam Grah Sajja. Agrawal Publications, Agra ISBN: 978-93-81124-96-3.
2. Patni Manju & Sharma Lalita, Grah Prabandh, Star PublicationsAgra.
3. Cherunilam, F. & Hedggade, O. D. (1987). Housing in India. Bombay: Himalaya Publishing House.
4. Craig, H.T. and Rush, O.D. (1966). Homes with Character. Heath, 1966.
5. Faulkner, R. & Faulkner, S. (1961) Inside Today's Home. Rev. ed. © Holt, Rlnehart & Winston, Inc.
6. Goldstein. H & Goldstein V. (1954). Art in Everyday Life Macmillan Publishers.
7. Rutt, A.H. (1963) Home furnishing. John Wiley & Sons, Inc.
8. Supriya, K.B. (2004). Landscape gardening and designing with plants. Pointer Publishers.
9. Teresa, P. Lanker. (1960). Flower Arranging: Step-by-step Instructions for Everyday Designs. Florist Review.
10. Aggarwal, R. (2008). "Communication- today and tomorrow", New Delhi.: Sublime Company.
11. Dubey V. K, Srivastava Archana, Agrawal Garima, Grah Vigyan Prasar Avam Sampreshan. Star Publications Agra.
12. Harpalni B.D. Patni Manju, (Prasar Shiksha Avam Sanchar) Star Publications, Agra. ISBN 978-93-81246
13. Shaw Geeta Pushp, Shaw Jois Sheela, Prasar Shiksha, Vinod Pustak Mandir Agra. ISBN 81-7457-104-3.

Suggestive digital platforms weblinks- <http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Preparation of Audio-Visual Aids.
- d. Attendance.

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Second Year Semester 4 Home Science
Paper 2- Resource Planning & Decoration (Practical)

Programme/ Class: Certificate	Year: 2 nd	Semester: 4 th
Subject: HOME SCIENCE		
Couse Code: A120402P	Course Title: Resource Planning & Decoration (Practical)	
Credit: 2	Core Compulsory/ Elective	
Marks: 25	Min. Passing Marks:	
No. of Lectures: 30 (60 hours)		

Course Outcomes:

- Developing skills for making time plan for effective balance of work & leisure.
- Plan & prepare budget for the family
- Develop understanding for house planning & decoration.
- Use appropriate household equipment for work simplification.

UNIT	TOPIC	No. of Lectures
I	<ul style="list-style-type: none"> • Preparation of time plans for self and family. • Drafting family budget for different income groups. 	08
II	Market Survey of Household Equipments- (Pressure cooker, Toaster, Gas Stove, Mixer & Grinder, Refrigerator, Washing machine, Microwave, Solar cooker)	08
III	<ul style="list-style-type: none"> • Study of different house plans-designs and styles. • Draw a house plan keeping in mind the principles of house planning with special emphasis on plantation, water harvesting and other environment friendly factors, also place appropriate furniture in the floor plan using elements of design. 	07
IV	<ul style="list-style-type: none"> • Preparation of Color wheels & Color schemes. • Flower Arrangement & Floor Decoration (Rangoli)- application of Design principles and Elements of Arts, Innovation of new styles. 	07

Suggested Readings:

1. Alexander. N.J., (1972). Designing Interior Environment. New York: Harcourt Brace.
2. Bhargava, B. (2005). Family Resource Management and Interior Decoration, Jaipur: Apple Printer and V. R. Printers.
3. Faulkner, R., and Faulkner, S. (1975). Inside Today's Home, New York: Rinehart.
4. Gandotra, V., and Jaiswal, N. (2008). Management of Work in Home, New Delhi: Dominant Publishers and Distributors. (ISBN No. 81-7888-526-3).
5. Harmon. S., and Kennon, K. (2018). The Codes Guidebook for Interiors (5thEd.). New York: Wiley (ISBN: 978-1-119-34319-6).
6. Johanovich Inc. Ball, V. K. (1982). Art of Interior Design. New York: John Wiley & Sons.
7. Leach, S. D. (1978). Techniques of Interior Design Rendering and Presentation (1st Ed.). Architectural record Books (ISBN-13: 978-0070368057).
8. Mohanty, A.B. (1985). Guide to House Buildings. New Delhi: Inter India Publications.
9. Patni Manju & Sharma Lalita, Grah Prabandh, Star PublicationsAgra.

Suggestive digital platforms weblinks-

1. bit.ly/3fJfghi
2. <https://bit.ly/39mTwGQ>
3. <https://bit.ly/2JoXB2e>
4. <https://bit.ly/3ljkRWf>.
5. Svayam Portal, <http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- a. Assessment of Time-Energy, Budget & House Plans.
- b. Assessment of Market Survey Records.
- c. Assessment of Flower Arrangements and Rangoli.
- d. Attendance.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Third Year Semester 5 Home Science
Paper 1- Surface Ornamentation of Fabrics (Theory)

Programme/ Class: Certificate		Year: 3 rd	Semester: 5 th
Subject: HOME SCIENCE			
Couse Code: A120501T		Course Title: Surface Ornamentation of Fabrics (Theory)	
Credit: 6		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 90			
Course Outcomes: <ul style="list-style-type: none">• Knowing why fabrics look differently.• Identify the different techniques of fabric from surface.• Learn about finishes done on fabrics.• Knowing about dyeing fabrics.• Learn how printing on fabrics is carried.• Knowing the traditional embroideries of India.• Identifying traditional textiles of different states.			
UNIT	TOPIC		No. of Lectures
I	Techniques of Creating variety on fabrics: <ul style="list-style-type: none">a. Weaving.b. Finishing of fabrics.c. Dyeing of fabrics.d. Printing fabrics.e. Embroidery and other decoration methods.		10
II	Finishes: <ul style="list-style-type: none">a. Classification of fabric finishes.b. Study of purpose and process of finishes.c. General Purpose finishes -Bleaching, Mercerization, Calandering, Sanforization, Tentering, Singeing, Scouring.d. Functional Finishes.		10
III	Dyeing: <ul style="list-style-type: none">a. Classification and use of dyes-Natural v/s Synthetic, (Basic, Acidic, Direct, Azoic, Natural, Sulphur, Vat, Disperse and Reactive dyes).b. Resist Dying Techniques- Tie & Dye, Batik.		10
IV	Printing: <ul style="list-style-type: none">a. Direct printing- Block, Screen, Stencil, Roller.b. Transfer printing.c. Discharge printing, Resist printing.d. Polychromatic, Inkjet and Digital printing techniques.e. After treatment of dyed and printed goods.		14

V	Traditional Embroideries: <ol style="list-style-type: none"> Meaning and status of traditional craft of India. Knowing about the Traditional Embroideries of different states Zardozi, Kashida of Kashmir, Phulkari of Punjab, Kantha of Bengal Chikankari, Kasuti, of UP, Sindh and Kutch work of Gujarat. 	12
VI	Traditional Textiles: <ol style="list-style-type: none"> Knowing the Traditional textiles of different states of India. Woven fabrics- Baluchars, brocades, Kashmir carpets, Patola, Ikat, Pochampalli, Chanderi. Printed, painted and dyed-Sanganeri, Bhagru, Kalamkari, Madhubani, Bandhani. 	12
VII	Water: <ol style="list-style-type: none"> Water and its uses in textile industry, properties. Hardness and removal of Hardness of water. 	10
VIII	Laundry and dry cleaning of fabrics and garments: <ol style="list-style-type: none"> Methods of Laundry and Dry cleaning. Dry cleaning process. Reagents of Laundry-Blues, Bleaches, Optical Brighteners, Stiffening agents. Types of soaps and detergents. 	12

Suggested Readings:

1. Marsh JT: Textile Finishes.
2. Trotman Er: Dyeing And Chemical Technology of Fibres.
3. Joseph M: Introduction to Textiles.
4. Corbman P Bernard: Textiles- Fibre to Fabric.
5. Hollen & Saddler: Introduction to Textile.
6. J. Hall: The Standard Hand Book of Textiles, Wood Head Publication, 2004.
7. J.E. Smith: Textile Processing –Printing, Dyeing, Abhishek Publishing, 2003.
8. Kate Broughton: Textile Dyeing, Rockport Publishers, 1996.
9. W.S. Murphy: Textile Finishing, Abhishek Publication, 2000.
10. Naik. D. Shailiaja: Traditional Embroideries of India, New Age International Publishers, 1996.
11. Naik. D. Shailiaja, Jacquie.A. Willson: Surface Designing of Textile Fabrics, New Age International Publishers, 2006.
12. Bhargav, Bela. Vastra Vigyaan, Univ. Book House Pvt. Avam Dhulai Kala, University Book House Pvt Ltd. Jaipur.
13. Patni. Manju, Vastra Vigyaan Avam Paridhan ka Parichay, Star Publications, Agra.

Suggestive digital platforms weblinks-

Swayam Portal: <http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- Seminar/ Presentation on any topic of the above syllabus.
- Test with multiple choice questions/ short and long answer questions.
- Subjective long questions.
- Attendance.

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Third Year Semester 5 Home Science
Paper 2- Community Development & Programme Planning (Theory)

Programme/ Class: Certificate		Year: 3 rd	Semester: 5 th
Subject: HOME SCIENCE			
Couse Code: A120502T		Course Title: Community Development & Programme Planning (Theory)	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: <ul style="list-style-type: none">• Get to know the dynamics of Community Development & organise system of Development.• Creating awareness about the various development programmes.• Identify the leadership pattern in the community.• Impart skills to implement, monitor and evaluate programmes.			
UNIT	TOPIC		No. of Lectures
I	Community Development: Meaning, Definition, Functions, Objectives, Philosophy, Principles of Community Development Programme in India.		08
II	Community Development Organization: <ul style="list-style-type: none">a. Meaning, Types, Principles.b. Role & Administrative Structure at the National, State, District, Block & Village levels		08
III	Home Science Extension Education in Community Development: Origin, Concept, Need, Importance and Contribution of Home Science Extension Education in National Development.		07
IV	Recent Development Programme for Women & Children: Support to Training & Employment for women (STEP), Swarn Jayanti Gram Swarojgar Yogna (SGSY), Integrated Child Development Services (ICDS) etc.		07
V	Support Service of Youth Development: NCC, NSS, Youth Camp		07
VI	NGO & Others: Contribution towards community services, Types & Role of NGO - WHO, CARE, UNICEF, UNESCO, UNDP, CRY, HELP-AGE INDIA.		08
VII	Leadership: <ul style="list-style-type: none">a. Concept, Definitions, Types, Importance, Function and Role of Community leaders.b. Methods of Identifying and Training of leaders		07
VIII	Programme Planning: Principles of Programme planning component cycle and its components- <ul style="list-style-type: none">a. Designing the project – Defining the objectives, Identifying resources.b. Implementation.c. Monitoring and Evaluation.		08

Suggested Readings:

1. Clark John. (1991). **Voluntary Organizations: Their Contribution to Development**. London: Earth Scan.
2. Dahama, O.P., & Bhatnagar, O.P. "Extension & Rural Welfare". New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.
3. Ghosh Bhola Nath, (1996), "Rural Leadership & Development" Mohit Publications, New Delhi.
4. Julie Fisher. (2003). **Governments, NGO's and the Political Development of the Third World**. Jaipur: Rawat Publications.
5. Mohsin Nadeem, (1985), "Rural Development through Government Program" Mittal Publications New Delhi.
6. Manju Patni & Harpalini, (2018) **Prasar Shiksha avam sanchar**, Star Publications, Agra.
7. Reddy, A [1987]. "Extension Education". Bapatha, Andra Pradesh, India.: Sreelakshmi Press.
8. Ravi Shankar Kumar Singh. (2003). **Role of NGO's in Developing Countries (Potentials, Constraints and Policies)**. New Delhi: Deep & Deep Publications (P) Ltd.

Suggestive digital platforms weblinks-

- <https://bit.ly/3l3Ayaj>
- <https://bit.ly/35RnyAi>
- <https://www.un.org/en/universal-declaration-human-rights/>
- <https://www.un.org/womenwatch/daw/cedaw/text/econvention.html>
- <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>
- <https://www.undp.org/content/undp/en/home/sustainable-development-goals.html>
- <https://bit.ly/39ROD8X>
- <https://www.unicef.org/>
- <https://www.who.int/about>
- <https://www.careindia.org/>

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Third Year Semester 5 Home Science
Paper 3- Community Transformation (Change) (Practical)

Programme/ Class: Certificate	Year: 3 rd	Semester: 5 th
Subject: HOME SCIENCE		(Practical)
Couse Code: A120503P	Course Title: Community Transformation (Change)	
Credit: 2		Core Compulsory/ Elective
Marks: 25		Min. Passing Marks:
No. of Lectures: 30 (60 hours)		

Course Outcomes:

- **Address and resolve Women & Family related issues.**
- **Use the Audio-visual aids in planning and conducting group communications.**
- **Organizing and encouraging people for their own development.**
- **Understand the role of Government Bodies in the development of the Community.**

UNIT	TOPIC	No. of Lectures
I	Identify the target group & their relevant issues i.e. poor health, malnutrition, illiteracy, poverty, domestic issues related to women and children. Observe and critical analysis of welfare programme followed by preparation of report.	08
II	Stimulation in nearby community for local economy through acquiring skills in surface ornamentation of fabric such as tie and dye, batik, block, stencil printing and spray (any three), Kashida of Kashmir, Phulkari of Punjab, Kantha of Bengal, chicken kari of Lucknow, kutch work of Gujrat Sindhi stitch, Kasuti of UP and zardozi work(any three).	07
III	Prepare & learn the use of Audio-visual Aids.	07
IV	Develop a script in the Folk drama (Nukkad Natak) format to perform in the target group.	08

Suggested Readings:

1. **Mondal Sagar, Misra OP (2018) “Fundamentals of Extension education & Rural Development”, Kalyani Publications, New Delhi.**
2. **Mortiss PD (1988) Agricultural Extension- Practical Manual” Department of Primary Industries, Queens Land Government.**
3. **Pradhan.K. Varaprasad.C (2018) Glimpses of Practical in Extension Education, New India Publishing Agency. New Delhi.**
4. **Jaipal Singh.” Prasar Shiksha avam Gramin Vikas” SR Scientific Publications, Agra.**

Suggestive digital platforms weblinks-

1. <https://bit.ly/3922ZTH>
2. **Svayam Portal - <http://heecontent.upsdc.gov.in/Home.aspx>**

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.**
- b. Test with multiple choice questions/ short and long answer questions.**
- c. Attendance.**

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

B.A. Third Year Semester 6 Home Science
Paper 1- Dietetics and Therapeutic Nutrition (Theory)

Programme/ Class: Certificate		Year: 3 rd	Semester: 6 th
Subject: HOME SCIENCE			
Couse Code: A120601T		Course Title: Dietetics and Therapeutic Nutrition (Theory)	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: <ul style="list-style-type: none">• Gain knowledge about the principles of Diet Therapy.• Practical knowledge of dietary management in some common disorders.• Able to understand and develop modifications of the normal diet for therapeutic purpose.			
UNIT	TOPIC		No. of Lectures
I	Introduction: <ul style="list-style-type: none">a. Definition of Health and Therapeutic Nutrition.b. Importance of Diet Therapy.c. Objectives of therapeutic Diet.d. Principles of diet therapy		07
II	Diet and feeding methods: <ul style="list-style-type: none">a. Modification of normal diets for therapeutic purposes.b. Methods of modification.<ul style="list-style-type: none">i. On the basis of nutrients.ii. On basis of consistency.c. Different feeding methods.<ul style="list-style-type: none">i. Oral feeding.ii. Tube feeding.		07
III	Energy Metabolism: <ul style="list-style-type: none">a. The calorific value of food.b. Measurement of energy exchange in the body.<ul style="list-style-type: none">i. Direct calorimeter.ii. Indirect calorimeter.iii. Factors influencing the Basal Metabolic Rate.		08
IV	Diet during fevers: <ul style="list-style-type: none">a. Introduction to fever–<ul style="list-style-type: none">i. Acute fever.ii. Chronic feverb. Important changes in nutrition during fever.c. Modification of the diet.		07
V	Diet during Digestive system disorders: <ul style="list-style-type: none">a. Peptic ulcers–Causes, symptoms and diet modification.b. Diarrhea and Constipation –Causes, treatment and diet modification.		08
VI	Weight Management: <ul style="list-style-type: none">a. Overweight and Obesityb. Introduction to Obesityc. Causes of Obesityd. Diet Modification.		07

	e. Underweight <ul style="list-style-type: none"> i. Causes ii. Treatment iii. Diet Therapy 	
VII	Therapeutic Diets in Cardiac Diseases: <ul style="list-style-type: none"> a. Atherosclerosis- <ul style="list-style-type: none"> i. Introduction ii. Dietary factors influencing lipid level in blood. iii. Modification of diet and Meal Pattern. b. Hypertension- <ul style="list-style-type: none"> i. Causes and symptoms. ii. Diet in Hypertension. 	08
VIII	Endocrinal Disorders: <ul style="list-style-type: none"> a. Introduction to endocrinology. b. Various endocrine glands and their functions- Pituitary, Thyroid, Adrenal and Pancreas. c. Diabetes Mellitus- Occurrence types, symptoms, metabolic changes, dietary modification and educating the patient. 	08

Suggested Readings:

1. Sumati R Mudambi – “Fundamentals of food, Nutrition and Diet Therapy”, New Age International Pvt. Ltd, New Delhi, 6th Edition (2018).
2. B Srilakshmi- “Dietetics”, New Age International Publishers, New Delhi 2017.
3. Bamji MS, Krishnaswamy K and Brahmam GNV(Eds) (2009), Text book of Human Nutrition, 3rd Edition, Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi.
4. Dr. Brinda Singh- Aahar Vigyan evam Poshan, Panch sheel Prakashan, Jaipur, 2015; 13th Ed.
5. Dr. Devina Sahai, Samanya Evam Upcharatmak Poshan, New Age International Publishers.
6. Dr. Sheel Sharma, “Nutrition and Diet Therapy” PEEPEE Publishers and Distributers (P) Ltd. Delhi, 2014, 1st Ed.
7. Shubhangini A Joshi, – “Nutrition and Dietetics”, Mc Graw Hill Education Private Ltd., New Delhi, 2013.
8. Kumud Khanna– “Text book of Nutrition and Dietetics”, Elite Publishing House Pvt. Ltd, New Delhi, 7th Ed. 2013.
9. M Swaminathan– Essentials of food and Nutrition, Vol II, Applied Aspects, The Bangalore Printing and Publishing Co. Ltd, Bangalore, 2nd Edition 1985, Reprint 1997.

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Third Year Semester 6 Home Science
Paper 2- Research Methodology and Gender Development (Theory)

Programme/ Class: Certificate		Year: 3 rd	Semester: 6 th
Subject: HOME SCIENCE			
Couse Code: A120602T		Course Title: Research Methodology and Gender Development (Theory)	
Credit: 6		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures/Tutorials: 90			
Course Outcomes: <ul style="list-style-type: none">• Explain the concept and use of Research.• Develop a research proposal.• Learn about Data, Sample collecting, Classification and Report Writing.• Conduct Survey.• Get a better understanding of issues of women and how the women can be empowered.			
UNIT	TOPIC		No. of Lectures
PART- A			
I	Social Research: Concept, Scope and Steps of research.		10
II	Sampling: Concept, Types and Limitations of sampling.		12
III	Data Collection: <ul style="list-style-type: none">a. Sources of Data Collection- Primary & Secondary.b. Tools and techniques of Data collection- Interview schedule, Observation, survey, Questionnaire laboratory etc.		12
IV	Report Writing: <ul style="list-style-type: none">a. Summary, Conclusion and Recommendations.b. Writing references.c. Writing process of research report: Formal Style of writing, Preface, Chapterization, Headings, Tables.d. Figures, Appendices, Bibliography and Acknowledgement.		14
PART- B			
V	Women in Development: <ul style="list-style-type: none">a. Need, importance, scope.b. Role of women in development.c. History of women in development.		10
VI	Women's Organizations & Collective Strength: <ul style="list-style-type: none">a. Need and scope and importance of women's organizations.b. Types of women organization- SHGs, FPOs and other groups.c. Steps of SHGs formation, advantages and disadvantages of SHGs.		10
VII	Employment Trends of women: <ul style="list-style-type: none">a. Need for self-employment.b. Opportunities & challenges in employment of women.		10

	c. Employment trend of women in present.	
VIII	Entrepreneurship Development to empower women: a. Development of women entrepreneurs in India. b. Schemes available to encourage women entrepreneurship. i. Bhartiya Mahila Bank Business Loan. ii. Annapurna Scheme. iii. Stree Shakti Package. Mudra yojana scheme for women. iv. Mahila Udyam Nidhi scheme etc.	12

Suggested Readings:

1. C. R. Kothari: Research Methodology- Method and Techniques.
2. R. Kumar: Research Methodology: A step by Step Guide for Beginners.
3. M. H. Gopal: Introduction to Research Methodology for Social Sciences.
4. Good, Carter, Scales and Douglas: Methods of Research.
5. Bhasin, Kamla (2000). Understanding Gender. New Delhi. Kaali for Women.
6. Devi, Uma (1994). Women Work, Development and Ecology. New Delhi, Har-Anand Publications.
7. Krishna, Sumi (2007). Women's Livelihood Rights: Recasting Citizenship for Development, New Delhi, Sage Publications.
8. Sohoni, K Neeraj, (1994), Status of Girls in Development Strategies, New Delhi, Har- Anand Publications.
9. Gundry Lisa K. & Kickul Jill R.,2007, Entrepreneurship Strategy: Changing Patterns in New Venture.
10. Creation, Growth, and Reinvention, SAGE Publications, Inc.
11. Taneja & Gupta, 2001, Entrepreneur Development- New Venture Creation, Galgotia Publishing Company.
12. Patni, Manju. Anusandhan Vigyaan, Star Publications, Agra.
13. Sudha, G.S. Vyavsayik Prabandh ke Siddhant avam Udyamita,RBD Publications.
14. Gupta, U. C. Udyamita Vikas, Kailash Pustak Sadan, Bhopal.

**Suggestive digital platforms-
e-PG Pathshala- Inflibnet**

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Third Year Semester 6 Home Science
Paper 3 Therapeutic Diet Preparation and Nutrient Evaluation (Practical)

Programme/ Class: Certificate		Year: 3 rd	Semester: 6 th
Subject: HOME SCIENCE			
Couse Code: A120603P		Course Title: Therapeutic Diet Preparation and Nutrient Evaluation (Practical)	
Credit: 2		Core Compulsory/ Elective	
Marks: 25		Min. Passing Marks:	
No. of Lectures: 30 (60 hours)			
Course Outcomes: <ul style="list-style-type: none">• Develop and understand modification of the normal diet for Therapeutic Purposes.• Practical knowledge of dietary management in some common disorders.			
UNIT	TOPIC		No. of Lectures
I	Modification of normal diet for therapeutic purposes- Preparation and Presentation.		06
II	Therapeutic Diet Preparation and Nutrient: Calculation of- <ul style="list-style-type: none">a. Diet in fever.b. Diet in diarrhea.c. Diet in Constipation.		08
III	Therapeutic Diet Preparation and Nutrient: Calculation of some Common Disorders- <ul style="list-style-type: none">a. Diet in diabetes Mellitus.b. Diet in Hypertension.c. Diet in Atherosclerosis.		08
IV	Dietary Modification for weight management: Preparation and Nutrient Calculation of diet in- <ul style="list-style-type: none">a. Overweight & obesity.b. Underweight.		08
Suggested Readings: <ul style="list-style-type: none">1. Sumati R Mudambi – “Fundamentals of food, Nutrition and Diet Therapy”, New Age International Pvt. Ltd, New Delhi, 6th Edition (2018).2. B Srilakshmi- “Dietetics”, New Age International Publishers, New Delhi 2017.3. Bamji MS, Krishnaswamy K and Brahmam GNV(Eds) (2009), Text book of Human Nutrition, 3rd Edition, Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi.4. Dr. Brinda Singh- Aahar Vigyan evam Poshan, Panch sheel Prakashan, Jaipur, 2015; 13th Ed.5. Dr. Sheel Sharma, “Nutrition and Diet Therapy” PEEPEE Publishers and Distributers (P) Ltd. Delhi, 2014, 1st Ed.			

Suggested Continuous Evaluation Methods:

- a. Test with multiple choice questions/ short and long answer questions.
- b. Menu planning and calculation of nutrient requirement.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

**B.A. Fourth Year Semester 7 Home Science
Paper 1- Research Methodology and Statistics**

Programme/ Class: Certificate		Year: 4 th	Semester: 7 th
Subject: HOME SCIENCE			
Couse Code: A120701T		Course Title: Research Methodology and Statistics	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: <ul style="list-style-type: none">• Get the understanding of basic concepts, types, and significance of research.• Develop skills in formulating research problems, objectives, and hypotheses.• Students get prepared for independent research projects, dissertations, or theses.			
UNIT	TOPIC		No. of Lectures
I	<ul style="list-style-type: none">• Meaning and Scope of Statistics- Definition, importance. Role of Statistics in Research.• Descriptive Statistics- Classification, tabulation, frequency, distribution diagrammatic and graphical representation of data.• Measures of central tendency, dispersion, kurtosis.• Elements of testing of statistical hypothesis- Formulation of the problem. Need, importance, definition. Definition of Type-1 and Type-2 Errors. Level of signification. Lard sample test for proportions. Deference of Proportions for means and deference in mean.		15
II	<ul style="list-style-type: none">• Data collection tools and techniques-observations, telephone, survey, interview, questionnaire, case study, etc.• Application of student’s t-test for small sample for single mean, deference in mean. F-test for equality of variance.• Correlation- coefficient of correlation and its interpretation. rank correlation regression equation and predictions.• Non- parametric tests, parametric tests, difference between parametric and non- parametric tests, application for chi-square tests. Goodness of fit, independence of attributes 2x2 and RxC contingency tables.		15
RESEARCH METHODOLOGY			
III	<ul style="list-style-type: none">• Science and scientific methods.• Research- Definition, need, importance and scope in Home Science.• Types of Research- Historical, Survey, Experimental and Case study.• Definition and identification of a research problem- Selection of problem, characteristics of problem, theory, hypothesis, types of hypothesis, basic assumptions and the limitations of problem.• Sampling- Basic concepts, sample, universe, sample framing, sample unit, sampling techniques. Types of		15

	sample, selection of sample, benefits of sampling, evaluating a sample.	
IV	<ul style="list-style-type: none"> • Collection and analysis of data- Categorization, coding, tabulation, graphical, representation of data and statistical testing. • Scaling techniques, variables, postulates, index, reliability and validity of data. • Conclusions and recommendations- Summary techniques. Conclusions and recommendations. • Report writing- Preparation of report-format. Types, points to be kept in mind while preparing reports, footnotes, bibliographical, citations, appendices- <ol style="list-style-type: none"> a. Preparation of an Abstract. b. Paper for publication. 	15

Practical:

1. Calculation of Parametric and Non-Parametric tests.
2. Graphical representation of data.
3. Developing hypothesis and objectives.
4. Developing scales, questionnaire, index etc.
5. Preparation of interview schedules, schedules, scales, index.
6. Preparation of a report.

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

**B.A. Fourth Year Semester 7 Home Science
Paper 2- Advance Food Science**

Programme/ Class: Certificate		Year: 4 th	Semester: 7 th
Subject: HOME SCIENCE			
Couse Code: A120702T		Course Title: Advance Food Science	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: <ul style="list-style-type: none">• Understand the concept of Nutrition and Balanced diet.• Knowledge about different nutrients and food components.• Food adulteration and preservation.			
UNIT	TOPIC		No. of Lectures
I	<ul style="list-style-type: none">• Introduction- Definition of nutrients, nutrition, food and food science. Concept of nutrition, adequate nutrition, malnutrition, (overnutrition, undernutrition, and imbalance nutrition), balance diet and factors affecting balanced diet.		15
II	Carbohydrate, Fat, Protein, Vitamins and Minerals and their classification, sources, functions, RDA and deficiency disease.		15
III	Food Groups: <ul style="list-style-type: none">• Cereals- Definition of gelatinization, dextrinization, gluten. Structure, nutritional composition, types and selection, various preparation and changes during preparations.• Pulses and Legumes- Composition, types and selection, different ways of preparation, effective cooking on nutritive value.• Vegetables and Fruits- Composition, care in storage, methods of cooking, losses during cooking.• Milk and Milk products- Types and nutritional composition, preparation, effect of cooking and use in cookery.• Eggs- Structure, composition, methods to evaluate quality of eggs, methods of cooking and uses in cookery.• Meat, Fish and Poultry- Types, meat tenderness, factors affecting tenderness, methods of cooking, effect of cooking on nutritive value.• Condiments and Spices- Types and uses in cookery.• Fats and Oils- Types and uses in cookery.		15
IV	<ul style="list-style-type: none">• Food Preservation- Definition, methods and importance of food preservation.• Food Adulteration- Definition, types, food laws and quality control.		15
Practicals: <ul style="list-style-type: none">1. Cereals and pulse based preparations, vegetable and fruit preparation, milk preparation, egg, meat fish preparations, soups and salads preparations.			

2. Preparations of preserved items like jams, jellies, squash, pickles, murabba, ketchup etc.
3. Table setting and napkin folding.
4. Study on common adulteration.

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

**B.A. Fourth Year Semester 7 Home Science
Paper 3- Child Development**

Programme/ Class: Certificate	Year: 4 th	Semester: 7 th
Subject: HOME SCIENCE		
Couse Code: A120703T	Course Title: Child Development	
Credit: 4	Core Compulsory/ Elective	
Marks: 25+75	Min. Passing Marks:	
No. of Lectures: 60		
Course Outcomes: <ul style="list-style-type: none">• Gain knowledge of physical, emotional, and social development stages from infancy to adolescence.• Promotes nurturing, responsive, and age-appropriate interactions.• Aids in managing childhood anxiety, bullying, and peer pressure.• Examines the family dynamics, culture, education, and socio-economic status impact development.		
UNIT	TOPIC	No. of Lectures
I	<ul style="list-style-type: none">• Importance of Child Development and their aspects- Role of nature in determining intelligence, personality and behaviour. Major development in eight periods of span.• Personality Development- Definition, biological and socio-cultural factors affecting personality like family, school, society.• Theory- Introduction to psycho-analytical and cognitive theory and it’s importance in child development.	15
II	<ul style="list-style-type: none">• Physiology of Pregnancy- Menstrual cycle, conception, signs of pregnancy, stages of fetal development. Personal hygiene. Discomforts and complications during Pregnancy. Process of normal labour and new techniques in the field of fertility.• Care of Mother and Neonate- Immediate care of new born and the mother, physical characteristics and behaviour pattern of neonate, Evaluate the health of neonate, bath, sleep reflexes, vision, hearing, normal growth and development. Immunization schedule and their importance. AGPAR Scores.	15

III	<ul style="list-style-type: none"> • Infancy (0-2 years) – Milestones of development, development tasks of infancy. Physical and psychological care, bowel and bladder habits, posture in feeding, baby's room, clothing and nutritional problems. • Early Childhood (2 to 6 years) – Developmental tasks, personal hygiene, development of habit- feeding, bathing, sleeping, clothing. Common problems, behaviour problems and their management. • Middle Childhood (6 to 12 years) – Importance of development tasks, socialization- causes of social isolation in schools. Physical, motor, emotional, mental, moral and language development among the school age children. 	15
IV	<ul style="list-style-type: none"> • Adolescence Period- Physiological changes, problems in adjustments, juvenile delinquency- causes and cures. • Psychology of Adulthood- Significance, responsibilities and adjustments: new family, work place, parenthood, menopause, health issues, stresses in middle age, occupation and job satisfaction, preparation for retirement 	15

Practical:

1. Preparation of simple folder for parents regarding child guidance aspects.
2. Identifying behavioural problems among schools going children and giving suggestions to improve it.
3. Collection and study of any five problems of adolescence using newspaper and magazines.
4. Study of available baby foods and their evaluation. Preparation of weaning foods.
5. Improving creativity among pre-schools: art activities, other materials, music, rhythm, poetry, puppetry and creative drama.

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

**B.A. Fourth Year Semester 7 Home Science
Paper 4 Fundamentals of Clothing and Textiles**

Programme/ Class: Certificate		Year: 4 th	Semester: 7 th
Subject: HOME SCIENCE			
Couse Code: A120704T		Course Title: Fundamentals of Clothing and Textiles	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes:			
<ul style="list-style-type: none">• Appreciate the significance of traditional textiles in different regions of India.• Acquire basic principles of design (colour, line, texture, form) and how they apply to clothing.• Learn criteria for selecting appropriate clothing based on age, occasion, climate, and lifestyle.• Gain knowledge helpful for starting small businesses in tailoring, boutique management, or textile crafts.			
UNIT	TOPIC		No. of Lectures
I	<ul style="list-style-type: none">• Unity in Diversity in Indian Costumes-<ul style="list-style-type: none">a. North Indiab. South Indiac. Western Indiad. East Indiae. Middle India		15
II	<ul style="list-style-type: none">• Elements and Principles of Design.• Importance of colours, colour theories, colour wheel, colours in clothing.• Classification of Design- Structural and Decorative, realistic, abstract, stylised and geometric, traditional designs.		15
III	<ul style="list-style-type: none">• Collors, sleeves, yoke, cuffs and their types.• Clothing of different age groups, male, female, infancy, toddler, babyhood, pre-school child, adolescence, adulthood, old age.		15
IV	Introduction to Textile Industry in India, Importance in Indian Economy.		15
Practicals:			
<ol style="list-style-type: none">1. Drafting and construction of differ garments for different age groups with variations like- baby frocks, cribs, apron, tops, pants, blouse, petticoat, dresses, salwar kameez, trousers, shirts, skirts etc (any one).2. Preparation of different samples on design types.3. Class presentation of Indian Costumes.4. Field visits to Textile Miles, Handloom sectors, Weaver service centres, Khadi and village industries, Small Scale Industries.5. Organization of an exhibition on the dresses prepared.			

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Fourth Year Semester 8
Paper 1 Energy Management and Household Equipment

Programme/ Class: Certificate		Year: 4 th	Semester: 8 th
Subject: HOME SCIENCE			
Couse Code: A120801T		Course Title: Energy Management and Household Equipment	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: <ul style="list-style-type: none">• Understand how energy is used in households for cooking, lighting, heating, and appliances.• Promote responsible use of electricity, gas, and other energy forms.• Learn to plan and manage household expenses more effectively by minimizing energy costs.• Learn optimal kitchen and utility space planning for efficient energy use.			
UNIT	TOPIC		No. of Lectures
I	<ul style="list-style-type: none">• Concept of Home- Meaning, characteristics, concept, components and motivation of management value, goals and standards, needs and wants.• Decision making- Role and scope of decision- making, process and steps.• Family Resource Management (Energy and Time).		15
II	<ul style="list-style-type: none">• Application of New Technology: Family and community sized biogas plats, economic liability, socially acceptable, enough available to meet the energy needs particularly for the rural communities and low income groups. Refrigerators, solar energy coolers, solar water heaters, solar lamps, solar lights, solar pumps, considerations in biogas technology.		15
III	<ul style="list-style-type: none">• Developing of Design and Performance standards Development of standard, ergonomic considerations for equipment design organisation contributing to develop standards, types of standards already developed, standards for various equipment		15
IV	<ul style="list-style-type: none">• Characteristics and functions, design, use and care of equipment and their principles of work.<ul style="list-style-type: none">a. Smart appliances.b. Electrical appliances.c. Motor appliances.d. New electrical household appliances.e. Personal case appliances.		15
Practicals: <ul style="list-style-type: none">1. Survey and study of equipments available in the market.2. Developing Criteria for the selection of equipments.3. Evaluation of selected electrical/ non-electrical equipment.4. Survey related to kitchen equipments used in homes.5. A Comparative study of time norms determining time and energy saving devices.			

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

B.A. Fourth Year Semester 8
Paper 2- Extension Techniques and Programme

Programme/ Class: Certificate		Year: 4 th	Semester: 8 th
Subject: HOME SCIENCE			
Couse Code: A120802T		Course Title: Extension Techniques and Programme	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes:			
<ul style="list-style-type: none">• Become familiar with individual, group, and mass communication methods.• Application of Audio-Visual Aids and ICT Tools.• Learn to apply holistic solutions to community challenges.• Encourage adoption of new ideas, practices, or technologies.			
UNIT	TOPIC		No. of Lectures
I	Concept: Meaning, Scope, importance, need, principles, philosophy and objectives of extension. Steps and process, elements involved in the extension education. Teaching, learning process. Qualities of extension worker. Role of extension in Research works and Development. Extension teaching methods.		15
II	<ul style="list-style-type: none">• Methods of communication: Models, Classification of extension teaching methods according to individual, group and mass approach.• Media of Communication: Definition, meaning, need, importance. Scope, process. theories. Classification of Audio - visual aids, its importance in Extension. Significance of each with respect to community needs. Advantages and Limitations of each.		15
III	<ul style="list-style-type: none">• Understanding Adult Learners: Characteristics of Adult learners, theories and principles of adult learning. Adult learning process, difference between adult learning and child learning, motivation technique. Problems of adult learners. Need based education. The Process of Adoption process. Factors influencing adoption innovation.• Rural Development Programme: History of Community Development Movement in India. Evolution of Panchayati Raj and Democratic Decentralisation – 5 year Plan. Factors influencing adoption innovation		15
IV	<ul style="list-style-type: none">• Role of Voluntary Agencies: Contribution of voluntary agencies to Rural development –<ul style="list-style-type: none">a. Central and State Welfare Boards Bhartiya Grameen Mahila Sang.b. All India Women's Conference.c. Kasturba Gandhi National Memorial Trust and other's.• Entrepreneurship- Concept and process.		15

Practicals:

1. Assessment of the status in nearby village/Slum and location of their needs.
2. Visits to any development organization, NGO's in nearby location
3. Organize and conduct an adult education programme in the form of skit/drama/puppet etc.
4. Preparation and use of Audio - Visual aids.
5. Preparation and Use of different extension teaching methods.
6. Organizing small communication programme.
7. Visit to any self enterprise and Preparation of sample entrepreneurship project.

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

**B.A. Fourth Year Semester 8
Paper 3- Community Nutrition**

Programme/ Class: Certificate		Year: 4 th	Semester: 8 th
Subject: HOME SCIENCE			
Couse Code: A120803T		Course Title: Community Nutrition	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes: <ul style="list-style-type: none">• Learn about the dietary requirements of different population groups.• Understand public health concerns like protein-energy malnutrition, anaemia, obesity, and micronutrient deficiencies.• Awareness of Government Nutrition Programmes and Policies.• Understand how nutrition varies with age, gender, activity level, and health status.			
UNIT	TOPIC		No. of Lectures
I	<ul style="list-style-type: none">• Introduction- Community nutrition, health and role of community nutrition on public health.• Nutritional Status. Assessment of nutritional status- Anthropometric measurement, dietary survey and clinical survey. Role of national and international organizations in improving the nutritional status of the community.		15
II	<ul style="list-style-type: none">• Pregnancy and lactation- Food requirement during pregnancy and lactation. Complication and physiological and hormonal changes during pregnancy.• Infancy- Nutritional requirement during infancy. Colostrums, breast feeding, bottle feeding, weaning food, supplementary foods. Nutritional problems in infancy.• Pre-school age- Nutritional requirement. Nutritional problem and food habits of pre school children		15
III	<ul style="list-style-type: none">• School age children- Nutritional requirement, food habits and nutritional problem.• Adolescence- Physiological changes, nutritional requirement and eating disorders, food habits.• Adulthood- Nutritional requirement and food habits.• Old age- Physiological changes, nutritional requirement. food habits and nutritional problems.		15
IV	<ul style="list-style-type: none">• Therapeutic adaption of normal diet, progressive diets, regular diet, liquid diet, semi liquid diet, clear liquid diet, soft diet.• Special feeding methods.• Etiology, pathology, metabolic changes, complication, dietary management for the following disorder-<ul style="list-style-type: none">a. Gastro-intestinal disorder, fever, liver and gall bladder, cardio vascular disease.		15

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|--|---|--|
| | b. Metabolic disorder- diabetes and gout. Obesity, overweight and underweight. Pre and post operative diet. | |
|--|---|--|

Practicals:

1. Identification of nutritional problem prevalent in community using method of nutritional assessment.
2. Plan a diet for different age group.
3. Plan a liquid, semi liquid, soft and regular diet for a patient.
4. Plan a diet for gastro intestinal disorder, febrile disease, fever, liver, gall bladder, cardio vascular, metabolic disorder- Diabetes and gout, obesity and under-weight patient.

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

**This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.**

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.

**B.A. Fourth Year Home Science
Paper 4- Ergonomics**

Programme/ Class: Certificate		Year: 4 th	Semester: 8 th
Subject: HOME SCIENCE			
Course Code: A120804T		Course Title: Ergonomics	
Credit: 4		Core Compulsory/ Elective	
Marks: 25+75		Min. Passing Marks:	
No. of Lectures: 60			
Course Outcomes:			
<ul style="list-style-type: none">• Learn the meaning and scope of ergonomics and importance human-centred designs.• Gain skills to design efficient and safe workspaces, tools, and furniture.• Learn the ways in which ergonomic interventions enhance worker’s performance and reduce fatigue.• Understand how noise, lighting, temperature, and mental workload affect human performance and accordingly plan environments that support concentration and comfort.			
UNIT	TOPIC		No. of Lectures
I	<ul style="list-style-type: none">• Concept of Work<ul style="list-style-type: none">a. Classical concepts of work as an essential activity for survival.b. Modern concepts of work - Major determinant in relationships of human behaviour to develop personality, identity, self esteem, social attitude, economic security and status symbol.		15
II	Considerations of ergonomics in interior designing- <ul style="list-style-type: none">a. Importance or ergonomics in interior design.b. Work, worker and working environment relationships.c. Kitchen and storage as the most important working areas.d. Ergonomically evaluation for health and safety of user in residential space design.e. Study of different body postures used in different activities and it’s relation to fatigue.		15
III	Work environment <ul style="list-style-type: none">a. Indoor and outdoor climate-<ul style="list-style-type: none">i. Temperature, Air movement. Air humidities and general air.ii. Human heat balance, heat exchange between human body and surroundings.iii. Comfort and discomfort, factors affecting comfortable temperature.b. Ventilation, requirements of air movements (Windows and doors).		15
IV	General Features of working conditions. <ul style="list-style-type: none">a. Lighting- Adequate of lighting at work place - Physiological requirements, day light and artificial lighting, psychological effects of lights and colour.b. Flooring-		15

- | | | |
|--|--|--|
| | <ul style="list-style-type: none"> i. Thermal properties of flooring and their effect on physical conditions at work. ii. Accident safety. iii. Ease of cleaning. | |
| | <ul style="list-style-type: none"> c. Noise- <ul style="list-style-type: none"> i. Terms and definitions, source of noise, indoor and outdoor, noise load and noise levels. ii. Effects of noise - Physical and psychological and intellectual activities. | |

Practicals:

1. Determining minimum space required for selected activities.
2. Determining the relationship of anthropometric dimension of workers with space requirement of selected activities.
3. Measuring physical fatigue arising from performing household activities.
4. Practical application of work simplification techniques.
5. A survey of channel of distribution of goods available through retail marketing, general stores, whole sale marketing.

Suggested Continuous Evaluation Methods:

- a. Seminar/ Presentation on any topic of the above syllabus.
- b. Test with multiple choice questions/ short and long answer questions.
- c. Attendance.

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is (10+2) with any subject.

Course prerequisites:

To study this course, a student must have had the subject: ALL in class 12th.