



University of Pune

**UNIVERSITY OF PUNE**

**First Year Syllabus For The  
Three-Year Integrated Bachelor of Science (B.Sc.) In Home  
Science Degree Course**

**To be introduced from  
Academic Year 2015-16**

## Faculty of Home Science

### Proposed curriculum structure to be implemented from June 2015

Semester	No. of Papers (T)	No. of Practical (P)	Theory (60 marks)	Practical (40 marks)	Total (100)	Workload*		
I	5	5	300	200	500	5Tx4 <sup>*</sup> =20 5Px3 <sup>*</sup> =15	35	35
II	5	5	300	200	500	5Tx4 <sup>*</sup> =20 2Px3 <sup>*</sup> =15	35	
III	5	5	300	200	500	5Tx4 <sup>*</sup> =20 5Px3 <sup>*</sup> =15	35	35
IV	5	5	300	200	500	5Tx4 <sup>*</sup> =20 5Px3 <sup>*</sup> =15	35	
V	5	5	300	200	500	5Tx4 <sup>*</sup> =20 5Px3 <sup>*</sup> =15	35	35
VI	5	5	300	200	500	5Tx4 <sup>*</sup> =20 5Px3 <sup>*</sup> =15	35	
<b>Total</b>	<b>30</b>	<b>30</b>	<b>1800</b>	<b>1200</b>	<b>3000</b>		<b>210</b>	<b>105</b>

# **Semester - I**

## Semester – I

Paper No. Subject		Exam scheme												Exam At By	
		Theory								Theory					
		External		Internal		External		Internal		External		Internal			
		Max. Marks	Min. Mark	Max. Marks	Min. Marks										
1	Human Anatomy & Physiology	50	20	10	04	-	-	-	-	50	20	10	04	The end of Sem	The College
2	Introduction to Textile & Clothing	50	20	10	04	-	-	-	-	50	20	10	04		
3	Prenatal stages to childhood (CD)	50	20	10	04	-	-	-	-	50	20	10	04		
4	Introduction to extension education	50	20	10	04	-	-	-	-	50	20	10	04		
5	Family Resource Management (HM)	50	20	10	04	-	-	-	-	50	20	10	04		
Pr 6	Based on Paper No. 1	-	-	-	-	30	12	10	04	30	12	10	04	The end of Sem	The College
Pr 7	Based on Paper No. 2	-	-	-	-	30	12	10	04	30	12	10	04		
Pr 8	Based on Paper No. 3	-	-	-	-	30	12	10	04	30	12	10	04		
Pr 9	Based on Paper No. 4	-	-	-	-	30	12	10	04	30	12	10	04		
Pr 10	Based on Paper No. 5	-	-	-	-	30	12	10	04	30	12	10	04		
<b>Total</b>		<b>250</b>		<b>50</b>		<b>150</b>		<b>50</b>		<b>400</b>		<b>100</b>			

**F.Y. B. Sc. (Home Science) – Sem.- I**  
**Paper 1 : Human Anatomy & Physiology**

Theory - 4lec./week  
 Practical -

Theory -60 marks  
 Practical -40 marks

<b>Unit I</b>	<p><b>Introduction to various systems of the body</b></p> <ul style="list-style-type: none"> <li>• Animal Cell: structure, functions of each component (organelle) of the cell.</li> <li>• Tissues: Structure and functions of various types of tissues.</li> <li>• Bones: Various types, functions, structure of bone.</li> <li>• Joints: Classification and movements of various joints.</li> </ul>	<b>07</b>
<b>Unit II</b>	<p><b>Digestive System</b></p> <ul style="list-style-type: none"> <li>• Structure and functions of salivary glands, stomach, small intestine pancreas, and liver.</li> <li>• Mechanism of mastication and swallowing.</li> <li>• Digestion and absorption of carbohydrates proteins &amp; fats.</li> </ul> <p><b>Excretory Systems</b></p> <ul style="list-style-type: none"> <li>• Organs of excretion, their structure and functions (Kidneys, ureters and Urinary Bladder)</li> <li>• Mechanism of urine formations.</li> <li>• Normal and abnormal constituents of Urine.</li> </ul> <p><b>Skin</b></p> <ul style="list-style-type: none"> <li>• Structure and functions of skin.</li> </ul> <p>Regulation of body temperature.</p>	<b>04</b>  <b>04</b>  <b>05</b>
<b>Unit III</b>	<p><b>Cardiovascular system</b></p> <ul style="list-style-type: none"> <li>• Blood – Composition and functions of blood, including functions of each component, coagulation of blood &amp; its significance. Blood groups and Rh factor.</li> <li>• Heart – Structure and functions of Human heart. Cardiac cycle.</li> <li>• Blood Pressure – Systolic and diastolic Blood pressures, its physiological variations.</li> </ul> <p><b>Respiratory System:</b></p> <ul style="list-style-type: none"> <li>• Organs, their structure &amp; functions including Tracers. Bronchi &amp; Lungs.</li> </ul>	<b>06</b>         <b>04</b>

	<ul style="list-style-type: none"> <li>• Mechanism of Respiration &amp; its Regulations. O<sub>2</sub> and CO<sub>2</sub> Transport</li> </ul>	
<b>Unit IV</b>	<p><b>Female Reproductive System:</b></p> <ul style="list-style-type: none"> <li>• Structure and functions of various, fallopian tubes and uterus.</li> <li>• Menstrual cycle, ovulation and menopause.</li> <li>• Pregnancy, parturition and Lactation.</li> </ul> <p><b>Male Reproductive System:</b></p> <ul style="list-style-type: none"> <li>• Spermatogenesis.</li> </ul> <p><b>Nervous System:</b></p> <ul style="list-style-type: none"> <li>• Structure of Neuron.</li> <li>• Structure and function of cerebrum &amp; cerebellum.</li> </ul>	<p><b>08</b></p> <p><b>02</b></p> <p><b>04</b></p>
<b>Unit V</b>	<p><b>Endocrine glands:</b></p> <ul style="list-style-type: none"> <li>• Structure and function of pituitary gland.</li> <li>• Structure and function of thyroid gland.</li> </ul>	<b>04</b>

**Practical:**

1. Determination of blood groups.
2. Estimation of a) Hemoglobin b) Bleeding c) clotting time.
3. Recording heart rate & blood pressure.
4. Physical & chemical examination of Urine.
5. Identification of slides.
6. Study and identification of various bones.

## References

1. Guyton A.C., Hall, A. J. – Text Book of Medical Physiology.
2. K. Sembulingam – Essentials of Medical Physiology.
3. Chatterjee – Text Book of Medical Physiology.
4. Chaterjee C. C. Human Physiology.
5. Gardeb W. and sears : Anatomy and physiology for Nurses.
6. Guyton : Functions of Human body.
7. Jacfob and francone : Elements of Anatomy and Physiology.
8. Joglakar V. H. “kjhj foKku
9. Sharpe L. & L. Schafer Histology.
10. Best and Taylerr : Human Body.
11. Rastogee Text Book of Cytology.

**F.Y. B. Sc. (Home Science) – Sem.- I**  
**Paper 2 : Introduction to Textile & Clothing**

Theory - 4lec./week  
 Practical -

Theory -60 marks  
 Practical -40 marks

<b>Unit I</b>	<b>Introduction to textile science</b> <ul style="list-style-type: none"> <li>• Terminology in textiles, History, textile fibers.</li> <li>• Textile fibers &amp; its classification.</li> <li>• Properties &amp; use of different textile fibers – cotton, silk, rayon, polyester, acrylic, polyamide and other fibers.</li> <li>• Types of yarn, yarn twist, yarn count, yarn crimp and strength.</li> <li>• Yarn manufacturing process.</li> </ul>	10
<b>Unit II</b>	<b>Fabric Construction</b> <ul style="list-style-type: none"> <li>• Methods of fabric construction – Primitives and modern methods felting, weaving, knitting, braiding</li> </ul>	8
<b>Unit III</b>	<b>Fundamentals of clothing Construction</b> <ul style="list-style-type: none"> <li>• General principles of clothing construction</li> <li>• Drafting &amp; making paper patterns, taking body measurements for different types of garments.</li> <li>• Preparation of Fabrics for garment making layout of patterns cutting &amp; Marketing</li> </ul>	15
<b>Unit IV</b>	<b>Performance Related Legislative Act</b> <ul style="list-style-type: none"> <li>• Beuro of Indian Standards</li> <li>• Flammable Fabric Act</li> <li>• Wool Label Act</li> <li>• Eco Labeling</li> <li>• Silk Mart</li> <li>• Handloom Mark ( Functions &amp; objectives to be cover)</li> <li>• Care labeling act &amp; types of care labeling</li> </ul>	15

**Practical:**

1. Introduction to Sewing equipments and tools, sewing machine & its Care.
2. Preparation of Samples of running stitch, Darning stitch, hemming stitch, invisible stitch, decorative stitch.
3. Body measurements, measurements from garments
4. Cutting & stitching of different garments Baby Garment (complete latté set, romper)
5. Collection of different samples of fabric (Preparation of album)

**References**

6. Majory L. Josheph ‘ Essentials of Textiles’
7. Lewis ‘comparative clothing construction Techniques.’
8. Gohl EPG & Vilensky L.D. ‘Textile Science’ CBS publishers &
9. Distributor, Delhi.
10. Corbman B.P. ‘Textile fiber to fabric Mc. Graw Hill Inc.
11. Toratora S.G., Understanding Textiles, Holman & Sons.
12. Wynne A. Textiles- The Motivate series , Macmillan
13. Bane A., Creative clothing Constructions, McGraw Hill Book company, new York.
14. Riders Digest, Complete Guide to sewing , Readers digest association , New York.
15. Singer, Sewing step by stitching, Decosse incorporation USA

**F.Y. B. Sc. (Home Science) – Sem.- I**  
**Paper 3 : Child Development**  
**(Prenatal stages to childhood)**

Theory - 4lec./week  
 Practical -

Theory -60 marks  
 Practical -40 marks

**Objectives:**

1. To become acquainted with the developmental stages from prenatal stage to childhood.
2. To develop awareness of important aspects of development during prenatal stage to childhood.
3. To understand the problems and hazards faced by an individual throughout prenatal stage to childhood.

<b>Unit 1</b>	<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>• Meaning of life span development and need to study development through the life course.</li> <li>• Life span development- a multidisciplinary approach.</li> <li>• Different periods in life span development.</li> <li>• Components of development and inter-relationship between the aspects of development.</li> </ul>	15
<b>Unit 2</b>	<p><b>Prenatal Development</b></p> <ul style="list-style-type: none"> <li>• Introduction to prenatal development- stages: period and ovum, embryo, fetus.</li> <li>• Case during pregnancy and factors affecting prenatal growth and development.</li> <li>• Infancy: Definition, Physical growth and development in infancy, reflects emotional states, physical growth and motor development, brain.</li> <li>• Developmental tasks of infancy, milestone, and highlights of development.</li> </ul>	09
<b>Unit 3</b>	<p><b>Early Childhood Period (2-6 years)</b></p> <ul style="list-style-type: none"> <li>• Definition, Characteristics of Developmental Tasks of early childhood years.</li> <li>• Physical and motor development during early childhood period.</li> <li>• Language development during early childhood period.</li> </ul>	15

	<ul style="list-style-type: none"> <li>• Social and emotional development during E. C. period</li> </ul>	
<b>Unit 4</b>	<b>Middle Adulthood (6-12years)</b> <ul style="list-style-type: none"> <li>• Definition, Characteristics and Developmental Tasks of middle childhood.</li> <li>• Role of school in middle childhood. Effects of success and failure.</li> <li>• Peer group- Importance and functions.</li> </ul>	09

### Practical:

1. View films/CD on delivery.
2. Prepare a case study report of a pregnant women from 3<sup>rd</sup> month onwards.
3. Project on child rearing practices in different communities. (ex. Rural-Urban)(2-3 students group can be assigned one project.)
4. Visit to Nursery school and submission of Report.
5. Bulletin Display on current topics related to syllabus.(Group of 4-5 students)

Topics: 1. Discipline

2. Parenting

3. Family

4. Media and children.

### References

1. Craig. G. J. (1974): Child Development, printince Hall Inc. Englewood clifts, New Jersey.
2. Hurlock, E B. (1970): Child Development, Tata Megraw Hill Publishes, Delhi.
3. *Vaikasik Manasashastra: Borude. R. R. , Kumathekar M. , Desai B. , Golvilakar S. , Vidyarthi Gruhprakashan, Pune.*
4. *Manav Vikas: Kandalkar lina, Vidya Prakashan, Pune.*
5. *Balvikas, Dr. Varadpande N. Pimpalipure and k. Publishers, Nagpur.*
6. Berk L. E. Development through the Lifespan Person Education, Low Price edition.
7. Populia, D.E. and olds, S.W.(1975) "A Childs World" Tata Macqraw Hill Publication, Newuork.

**F.Y. B. Sc. (Home Science) – Sem.- I**  
**Paper 4 : Introduction to extension education**

Theory - 4lec./week  
 Practical -

Theory -60 marks  
 Practical -40 marks

**Objectives:**

1. To understand the concept of extension education.
2. To know the difference between extension education, formal and non formal education.
3. To develop the knowledge of Home Science extension education.

<b>Unit 1</b>	<b>Extension Education</b> <ul style="list-style-type: none"> <li>• Concept need and definition of extension education</li> <li>• History of extension education</li> <li>• Scope of extension education</li> <li>• Role of extension education in community development.</li> </ul>	09
<b>Unit 2</b>	<b>Philosophy And Principles Of Extension Education</b> <ul style="list-style-type: none"> <li>• Philosophy of extension education</li> <li>• Principles of extension education</li> <li>• Qualities and role of extension worker</li> </ul>	09
<b>Unit 3</b>	<b>Adult And Non Formal Education</b> <ul style="list-style-type: none"> <li>• Concept, meaning and need</li> <li>• Difference between formal and non formal education</li> <li>• Difference between extension, formal and non-formal education</li> </ul>	15
<b>Unit 4</b>	<b>Home Science Extension Education</b> <ul style="list-style-type: none"> <li>• Meaning and concept of home science extension education</li> <li>• History and definition of home science extension education</li> <li>• Scope of home science extension education</li> <li>• Role of home science extension education in rural and urban development</li> <li>• Areas of home science extension education</li> </ul>	15

## **Practical :**

1. Preparation of questionnaire (1\*3)
2. Conduct a survey on different current issues of community (2\*3)
3. Analysis of information about conducting survey (Group discussion) (1\*3)
4. Project work on –adult education, family planning, health hygiene or any current issues (3\*3)
5. Visit to KVK and report writing (2\*3)
6. To prepare a scrap on different areas of home science (3\*3)

## **References**

- 1) Extension and communication for development, O. P. Dahama and Bhatnagar
- 2) A Text book on ‘agricultural communication, process and methods by A. S. Sandhu
- 3) An introduction to extension education – Dr. S. V. Supe
- 4) Mass communication – Keval Kumar

**F.Y. B. Sc. (Home Science) – Sem.- I**

**Paper 5 : Home Management (Family Resource Management)**

Theory - 4lec./week  
 Practical -

Theory -60 marks  
 Practical -40 marks

<b>Unit No. 1</b>	<p><b>Management Process</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Meaning and definition</li> <li>• Basic concept of Management</li> <li>• Purpose of Management</li> <li>• Management and Change</li> <li>• Obstacles in Management</li> <li>• Misconception about Management</li> <li>• Steps of Management Process</li> </ul> <p><b>Motivating Factors</b></p> <ul style="list-style-type: none"> <li>• Goals: Meaning &amp; Definition and classification</li> <li>• Values: Meaning &amp; Definition, classification and characteristics</li> <li>• Standards: Meaning &amp; Definition and classification</li> </ul>	<b>10</b>
<b>Unit No. 2</b>	<p><b>Decision Making Process</b></p> <ul style="list-style-type: none"> <li>• Meaning and Definition</li> <li>• Types</li> <li>• Steps</li> <li>• Factors affecting decision making</li> </ul>	<b>5</b>
<b>Unit No.3</b>	<p><b>Family and Resource Management</b></p> <p><b>Family:</b></p> <ul style="list-style-type: none"> <li>• Meaning and Definition</li> <li>• Types and size of family</li> <li>• Characteristics</li> <li>• Stages of Family Life Cycle: Beginning, Expanding and Contracting</li> </ul> <p><b>Resources:</b></p> <ul style="list-style-type: none"> <li>• Meaning and Definition</li> <li>• Classification</li> <li>• Characteristics</li> </ul>	<b>10</b>

<b>Unit No.4</b>	<b>Money Management</b> <ul style="list-style-type: none"> <li>• Meaning and Definition</li> <li>• Classification of income, income profile</li> <li>• Methods of handling money</li> <li>• Budget: meaning, types and steps</li> <li>• Account keeping: meaning, types and advantages &amp; limitations.</li> <li>• Financial security: savings, insurance, taxation and investments</li> <li>• Factors affecting expenditure</li> </ul>	<b>8</b>
<b>Unit No.5</b>	<b>Time Management</b> <ul style="list-style-type: none"> <li>• Meaning</li> <li>• Classification of activities</li> <li>• Time cost</li> <li>• Tools</li> <li>• Management process applied to time</li> </ul>	<b>5</b>
<b>Unit No.6</b>	<b>Energy Management</b> <ul style="list-style-type: none"> <li>• Meaning</li> <li>• Classification of household tasks</li> <li>• Types of efforts</li> <li>• Energy management process</li> <li>• Factors affecting energy management</li> <li>• Fatigue: meaning, types, causes and remedies</li> </ul> <p>Work simplification – importance, definition, techniques and classes of change</p>	<b>10</b>

### **Practical:**

1. Apply the management process to organize a picnic / wedding anniversary. (Interactive Sessions) (1X3)
2. Write a report on decision making process of selecting Home Science as a field of education at under graduate level. (Interactive Sessions) (1X3)
3. Identify and categorize the available resources in your family. (1X3)
4. Prepare a monthly budget for a small unit family. (1X3)
5. Maintain the monthly expenditure in various types of accounting system.(2X3)
6. Make a time plan of a working college day and exam day. (1X3)

7. Observe the task carried out by the lab attendant through the use of informal paper and pencil techniques. (3X3)
8. Visit any well known management institute in Maharashtra. (2X3)

Bracket indicates **(No. of practical X hours)**

## **References**

1. Deacon, R. E. and Firebough, F. M. (1981): "Family Resource Management: Principles and Application". Allyn Bacon.
2. Gilberth, M. L. "Management in the Home".
3. Gross, Crandell and Knoll, (1980): "Management for Modern Families". Printice Hall Inc.
4. Kiran Kaur (2007): "Home Management" Srishti Book Distributors, New Delhi.
5. Nickill & Dorsey, (1991): "Management in Family Living", 4<sup>th</sup> Edition, Wiley and Eastern New Delhi.
6. Verghese, M. A., Ogale, N. N. and Srinivasan, K., "Home Management for Std. XI", Elements of Home Science, Premlata Mallick.

# **Semester - II**

## Semester II

Paper No. Subject		Exam scheme												Exam At By	
		Theory								Theory					
		External		Internal		External		Internal		External		Internal			
		Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks		
11	Food Science	50	20	10	04	-	-	-	-	50	20	10	04	The end of Sem	The College
12	Home Textiles & Care	50	20	10	04	-	-	-	-	50	20	10	04		
13	Human Development (Adolescence to old age)	50	20	10	04	-	-	-	-	50	20	10	04		
14	Communication and extension teaching method	50	20	10	04	-	-	-	-	50	20	10	04		
15	Art and Design (HM)	50	20	10	04	-	-	-	-	50	20	10	04		
Pr 16	Based on Paper No. 1	-	-	-	-	30	12	10	04	30	12	10	04	The end of Sem	The College
Prac -17	Based on Paper No. 2	-	-	-	-	30	12	10	04	30	12	10	04		
Pr 18	Based on Paper No. 3	-	-	-	-	30	12	10	04	30	12	10	04		
Pr 19	Based on Paper No. 4	-	-	-	-	30	12	10	04	30	12	10	04		
Pr 20	Based on Paper No. 5	-	-	-	-	30	12	10	04	30	12	10	04		
<b>Total</b>		<b>250</b>		<b>50</b>		<b>150</b>		<b>50</b>		<b>400</b>		<b>100</b>			

**F.Y. B. Sc. (Home Science) – Sem.- II**  
**Paper 11 : Food Science**

Theory - 4lec./week  
Practical -

Theory -60 marks  
Practical -40 marks

<b>Unit : I</b>	<b>Concept of food science</b>	8
	<ul style="list-style-type: none"> <li>• Definition</li> <li>• Scope &amp; application.</li> </ul>	
<b>Unit II</b>	<b>Food Groups : Classification, structure Composition Denaturation, &amp; other chemical change.</b>	
	<ul style="list-style-type: none"> <li>• Cereals: processing</li> </ul>	5
	<ul style="list-style-type: none"> <li>• Legumes &amp; Pulses: Toxic contents. and ant nutritional factors</li> </ul>	5
	<ul style="list-style-type: none"> <li>• Milk &amp; milk products</li> </ul>	5
	<ul style="list-style-type: none"> <li>• Vegetables &amp; Fruits- phytochemicals &amp; nutraceuticals</li> </ul>	5
	<ul style="list-style-type: none"> <li>• Meat, Poultry, Fish&amp; Eggs.</li> </ul>	5
	<ul style="list-style-type: none"> <li>• Fats &amp; Oils : PUFA, Omega 3 and 6 rich oils and importance</li> </ul>	10
	<ul style="list-style-type: none"> <li>• Condiments &amp; spices</li> </ul>	5

**Practical:**

1. Weighing and measuring of food items – flours, cereals and cereal Products, pulses and dal, sugar, oils and other liquid foods.
2. Preparation of using cereals and pulses.
3. Preparation of recipes using vegetables.
4. Preparation of recipes using fruits.
5. Preparation of recipes using fish, egg and meat.

6. Preparation of beverages.
7. Preparation of milk based products.
8. Effect of solutes on boiling point and freezing point of water. 1 x 3 hrs.
9. Effect of **hard and soft water** on characteristics of cooked Vegetables, pulses and cereals. 1 x 3 hrs.
10. Preparation of Sugar and Jaggery syrup, 2 x 3 hrs.
11. Preparation of Leavened products. 2 x 3 hrs.
12. Study of induction and microwave cookers
13. Preparation of fermented foods

### **References**

1. Charley H. (1982) : Food Science (2<sup>nd</sup> Edition), John Wiley and Sons, New York.
2. Potter N. and Hotchkiss, J. H. (1999) : Food Science, fifth edition, CBS publishers and distributors, New Delhi.
3. Belitz, H. D. and Grosch, W. (1989) : Food chemistry (2<sup>nd</sup> edition), Springer, New York.
4. Abers, R. J. (Ed) 1976) : Foam, Academic Press, New York.
5. Cherry, J. P. (Ed.) 1991) : Protein Functionally in foods, American Chemical Society, Washington, D.C.
6. Pomeranz, Y. (Ed.) (1991) : Functional Properties of Food components, (2<sup>nd</sup> edition), Academic Press, New York.
7. Duckworth, R. B. (Ed.) (1978) : Water Relation to Foods, Academic Press, London.
8. Parihar, P., Agrawal R., Jain D.K. and Mandhyam, B.L. (1977) : Status Report on Dehydration of Eggs. PHT / CAE / Publishers.
9. Marshall, K. R. and Horper, W. J. (1988) : Whey protein concentrates, IDE Bulletin No. 233.
10. Tindall, H. D. (1983) : Vegetables in the Tropics, MacMillan, Press, London.
11. Julians, B. O. (Ed.) (198) : Rice Chemistry and Technology, (2<sup>nd</sup> Edition), MacMillan Publishing Co., New York.
12. Peckham, G. and Freeland – Graves , G. H. (1979) : Foundation of Food Preparation.

13. Backer, P. (1965) ; Emulsions : Theory and practice, Rainhold, New York.
14. Belitz, H. D. and Grosch, W. (1999) : Food Chemistry, Springer, Verlag Berlin Deideberg.
15. Damodaran, S. and Parot, A. (editions) (1997) Food Protein and their applications, Marcel Dekker Inc.
16. Davis, M. B. Austin J. and Partridge, D. A. (1971) Vitamin : Its Chemistry and Biochemistry. The Royal society of Chemistry T. C., House, Science Park, Cambridge CB4 4WF.
17. Diehl. J. F. (1995) Safety of Irradiated Foods Marcel Dekker Inc. New York.
18. Friberg. S. E. and Lasson, K. (editions) (1977) Food Emulsions, Marcel Dekker, New York.
19. Goldberg 1 (ed) (1994) Functional Foods Champan and Mall Inc., India.
20. O' Brien, L. O. Nabors and Gelardi, R. C. (1991) Alternative Sweeteners, Marcel Dekker, New York.
21. Risch, S. J. and Hotchkiss, J. H. (ed.) (1991) Food Packaging Interactions II ACS Symposium Series 473, American Chemical Society, Washington D. C.
22. Marwaha, S. S. and Arora, J. K. (2000) Food Processing Biotechnological Applications Asiatech Publishers, Inc, New Delhi.
23. Mahindra, S. N. (2000) Food Safety – A Techno- legal Analysis, Tata Mc Goraw Hills Publishing Co. Ltd.
24. Mahindru, S. N. (2000) Food Additives – Characteristics Detection and Estimation Tata Mc Graw Hill Publishing Co. Ltd.
25. Borwankar, R. P. and Shoemaker, C.E. (1992) Rhedogy of Foods. Elsevier Science Publisher, Ltd. England.
26. Charlambour, G. (1990) Flavour of flavour 8, Elsevier Science Publishers Ltd., P. O. Box 211, 1000 AE Amsterdam, The Netherlands.
27. Salunke, D. K. and Kadam S. S. (2001) : Handbook vegetable science and Technology, Marcel Dekker, Inc. 270, Madisen Avenue, New York, Ny , 100016
28. FAO Food and Nutrition Paper : Manual of Food Quality Control Parts 14/L (1979) to 14/8 (1986), FAO the United Nations Rome.

**F.Y. B. Sc. (Home Science) – Sem.- II**  
**Paper 12 : Home Textiles & Care**

Theory - 4lec./week  
 Practical -

Theory -60 marks  
 Practical -40 marks

**Objectives:**

1. To develop the understanding about home textiles
2. To understand various sizes & types available in home textile
3. To acquaint the knowledge about selection & care of home textile

<b>Unit I</b>	<p><b>Table Linen</b></p> <ul style="list-style-type: none"> <li>• Different types of fabric use</li> <li>• Different sizes of table linen</li> <li>• Use &amp; care of table linen</li> </ul> <p><b>Bath Linen</b></p> <ul style="list-style-type: none"> <li>• Different types of fabric use</li> <li>• Different sizes of bath linen</li> <li>• Use &amp; care of bath linen</li> </ul> <p>Apries</p>	15
<b>Unit II</b>	<p><b>Kitchen towels &amp; napkins</b></p> <ul style="list-style-type: none"> <li>• Different types of kitchen towels</li> <li>• Sizes of kitchen towels &amp; napkins</li> <li>• Use &amp; care of kitchen towels &amp; napkins</li> </ul> <p><b>Floor covering</b></p> <ul style="list-style-type: none"> <li>• Origin &amp; classification of rugs</li> <li>• Different types of rugs &amp; carpets available in the market</li> <li>• Use &amp; care of floor coverings</li> </ul>	15
<b>Unit III</b>	<p><b>Bed Linen</b></p> <ul style="list-style-type: none"> <li>• Articles used in bed linen</li> <li>• Different sizes of bed linen</li> <li>• Selection &amp; car of bed linen</li> </ul>	8
<b>Unit IV</b>	<p><b>Curtains &amp; Draperies</b></p> <ul style="list-style-type: none"> <li>• Use &amp; care of curtains &amp; draperies</li> <li>• Difference between curtains &amp; draperies</li> <li>• Selection of curtains &amp; draperies</li> </ul>	10

**Practical:**

1. Rug making from old fabrics
2. Making of any home textile article by using machine embroidery.

**References**

1. Winget, Textiles & their selection
2. Ana Hong, Home Furnishing, Wiley Estern, New Delhi
3. Heather Luke, Lets Home Decorator,Soft Furnishing, Charles Letts & co.
4. Reders Digest, the complete book of sewing.

**F.Y. B. Sc. (Home Science) – Sem.- II**  
**Paper 13 : Human Development (Adolescence to old age)**

Theory - 4lec./week  
 Practical -

Theory -60 marks  
 Practical -40 marks

**Objectives:**

1. To become acquainted with the developmental stages from adolescence to old age.
2. To develop awareness of important aspects of development during adolescence to old age.
3. To understand the problems and hazards faced by an individual throughout adolescence to old age.

<b>Unit 1</b>	<b>Puberty and Adolscence</b>	12
	<ul style="list-style-type: none"> <li>• Definition, characteristics and Development Tasks</li> <li>• Physical Development, Puberty, Growth Spurt, Primary and Secondary sex characteristics, early and late mature.</li> <li>• Emotional Development during Adolescence, Heightened emotionally, Meaning, Causes, expression, characteristics of emotional maturity.</li> </ul>	
<b>Unit 2</b>	<b>Issues And Problems during Adolscence</b>	12
	<ul style="list-style-type: none"> <li>• Choosing Career- Stages factors affecting, selection</li> <li>• Friendship, types of peer group and its importance</li> <li>• Hazards during Adolscence : Drug Addiction, Alcoholism, Accidents, Suicide, STDs, ATDs Teen age pregnancies.</li> </ul>	
<b>Unit 3</b>	<b>Adulthood: Issues and concerns</b>	12
	<ul style="list-style-type: none"> <li>• Young Adulthood (Age 21-40) Definition, Meaning, Characteristics and Developmental Tasks.</li> <li>• Responsibilities and Adjustments : Parenthood, financial.</li> <li>• Middle Adulthood(Age41-60) Definition, Meaning, Characteristics and Developmental Tasks.</li> <li>• Physical changes- during middle adulthood,</li> </ul>	

	Menopause and health issues.	
<b>Unit 4</b>	<b>Old Age and Aging Issues</b>	12
	<ul style="list-style-type: none"> <li>• Definition, Meaning, Characteristics and Developmental Tasks.</li> <li>• Physiological changes, health problems, cognitive and memory changes.</li> <li>• Retirement: Effect of retirement on self, family, society and financial problems faced.</li> <li>• Preparing on self for Death.</li> </ul>	

**Practical:**

1. Sketching of self History on growing up stage.
2. Skit presentation in group on any topic from syllabus.
3. Case on any one topic: Menopause, Interview/ case study on Newly married couple, parenting, etc.
4. Visit on -1. Old age home or
  2. Remand home
  3. Junile home
5. Conducting recreational activity for grand parents/ aging people.

**F.Y. B. Sc. (Home Science) – Sem.- II**  
**Paper 14 : Communication And Extension Teaching Method**

Theory - 4lec./week  
 Practical -

Theory -60 marks  
 Practical -40 marks

**Objectives:**

1. To know the concept and meaning of communication.
2. To develop the skills regarding extension teaching methods.
3. To create awareness regarding various audio visual aids.

<b>Unit 1</b>	<b>Communication</b> <ul style="list-style-type: none"> <li>• Concept, meaning and definition of communication</li> <li>• Elements of communication</li> <li>• Functions of communication</li> <li>• Importance of communication</li> <li>• Barriers to communication</li> </ul>	09
<b>Unit II</b>	<b>Communication Process And Models</b> <ul style="list-style-type: none"> <li>• Communication process – two way process</li> <li>• Communication channels</li> <li>• Different models of communication</li> </ul>	09
<b>Unit III</b>	<b>Communication Media And Audio Visuals Aids</b> <ul style="list-style-type: none"> <li>• Traditional medias- puppets, streetplay, folk songs, folk theatres</li> <li>• Modern medias – radio, T.V, news paper, internet</li> <li>• Audio visuals aids – concept, meaning, definition and need.</li> <li>• Classification of audio visual aids</li> <li>• Selection and use of audio visual aids</li> </ul>	15
<b>Unit IV</b>	<b>Extension Teaching Methods</b> <ul style="list-style-type: none"> <li>• Meaning, nature and classification</li> <li>• Individual contact method</li> <li>• Group contact method</li> <li>• Mass contact method</li> <li>• Selection and use of extension teaching methods</li> </ul>	15

### **Practicals :**

1. To Study of existing communication tools for message dissemination, cost and impact. (3\*3)
2. Preparation of suitable communication aids for individual contact (2\*3)
3. Preparation of suitable communication aids for group contact (2\*3)
4. Preparation of suitable communication aids for mass contact (2\*3)
5. Enlist different traditional medias (1\*3)
6. Enlist modern media (1\*3)
7. To prepare different audio visual aids (Flash cards, leaflet or pamphlet, charts or posters etc ) (1\*3)

### **References**

- 1) Extension and communication for development, O. P. Dahama and Bhatnagar
- 2) A Text book on 'agricultural communication, process and methods by A. S. Sandhu
- 3) An introduction to extension education – Dr. S. V. Supe
- 4) Mass communication – keval kumar
- 5) Vistar Shikshan, Triveni Farkade.

**F.Y. B. Sc. (Home Science) – Sem.- II**  
**Paper 15 : Home Management (Art and Design)**

Theory - 4lec./week  
 Practical -

Theory -60 marks  
 Practical -40 marks

<b>Unit I</b>	<b>Introduction to Art and Design</b> <ul style="list-style-type: none"> <li>• Art: Meaning and definition</li> <li>• Design: Meaning, definition &amp; types</li> <li>• Elements &amp; principles of Art and Design</li> </ul>	10
<b>Unit II</b>	<b>Colour:</b> <ul style="list-style-type: none"> <li>• Importance</li> <li>• Dimensions of colour – Hue value &amp; Intensity</li> <li>• Classification of colours</li> <li>• Colour schemes and its application</li> </ul>	10
<b>Unit III</b>	<b>Flower Arrangement</b> <ul style="list-style-type: none"> <li>• Importance of Flower Arrangement</li> <li>• Materials required for Flower Arrangement</li> <li>• Tips required for preserving flowers and flower arrangements</li> <li>• Different types of Flower Arrangement for different occasions</li> </ul>	8
<b>Unit IV</b>	<b>Family Housing</b> <ul style="list-style-type: none"> <li>• Needs and functions of housing: protective, economic, psychological, educative and social</li> <li>• Factors affecting housing needs</li> <li>• Factors affecting selection &amp; purchase of site</li> <li>• Housing Schemes</li> <li>• Space planning for different activities</li> </ul>	10
<b>Unit V</b>	<b>Residential Furniture and Furnishing</b> <p><b>Furniture:</b></p> <ul style="list-style-type: none"> <li>• Selection of furniture</li> <li>• Furniture Arrangement</li> <li>• Care and maintenance</li> </ul> <p><b>Furnishing, linen and accessories:</b></p> <ul style="list-style-type: none"> <li>• Selection</li> <li>• Care and maintenance</li> </ul>	10

## Practical:

- 1) Preparation of colour wheel (1X3)
- 2) Value and Intensity of colour (1X3)
- 3) Colour schemes on different motifs: stylized, geometric, abstract and naturalistic (2X3)
- 4) Flower arrangements for different occasions using different types and styles. (2X3)
- 5) Make a scrap book illustrating the elements and principles of design (1X3)
- 6) Conduct a market survey and collect the information on floor coverings, furnishings and linen. (2X3)
- 7) Do a site survey and write a report on the visit of a residential project. (2X3)
- 8) Study & draw the architectural symbols & furniture templates (1X3)

Bracket indicates (No. Of Practical X hours)

## Reference

1. A text book of applied arts Dr. Sunita Barkar.
2. Farkade, T. (2012): "Gruh Ani Antar Sajavat". Pimplapure and Co. Publishers, Nagpur.
3. Faulkner Richart. "Inside Today's Home"
4. Foundation of Art & Design, Lakhani Book Depot. Bombay.
5. Goldstein & Goldstein, "Art in Everyday Life".
6. Introduction to Home furnishing, Macmillan
7. Kandalkar, Leena, (2012): "Kautumbik Saunsadhanachi Sankalpana". Akar Graphics, Nagpur
8. Kandalkar, Leena. (2012): "Gruh Arthshastrachi Multatva". Vidya Prakashan, Nagpur.
9. Limaye, K. (2010): "Gruh vyavasthapan ani Gruh Kala". Vidya Prakashan, 2Nagpur.
10. vk/kqfud x`gdyk MkW- {kek fye;s
11. vk/kqfud x`gO;oLFkkiu & olq egktu] fdrkc egy] ukxiwj