



**CIRCULAR NO.SU/B.Sc./CBC&GS /65/2023**

It is hereby inform to all concerned that, the syllabi prepared by the Board of Studies, Ad-hoc Boards and recommended by the Dean, Faculty of Science & Technology, the Hon'ble Vice-Chancellor has accepted the **following syllabi of Bachelor of Science with Practical Pattern of Question Paper under the scheme of Choice Based Credit & Grading System** in his emergency powers under section 12(7) of the Maharashtra Public Universities Act, 2016 on behalf of the Academic Council as appended herewith.

Sr.No.	Courses	Semester
1.	<b>B.Sc. Home Science (Degree)</b>	<b>IIIrd &amp; IVth semester</b>
2.	<b>B.Sc. Information Technology (Degree)</b>	<b>IIIrd &amp; IVth semester</b>
3.	<b>Bachelor of Computer Application (Degree)</b>	<b>IIIrd &amp; IVth semester</b>
4.	<b>B.Sc.Botany (Optional)</b>	<b>IIIrd &amp; IVth semester</b>
5.	<b>B.Sc.Dairy Science &amp; Technology(Optional)</b>	<b>IIIrd &amp; IVth semester</b>
6.	<b>B.Sc.Fisheries Science (Optional)</b>	<b>IIIrd &amp; IVth semester</b>
7.	<b>B.Sc.Computer Science (Optional)</b>	<b>IIIrd &amp; IVth semester</b>
8.	<b>B.Sc.Zoology (Optional)</b>	<b>IIIrd &amp; IVth semester</b>

This is effective from the Academic Year 2023-24 and onwards.

All concerned are requested to note the contents of this circular and bring the notice to the students, teachers and staff for their information and necessary action.

University Campus,  
Aurangabad-431 004.

REF.NO.SU/2023/30210-26

Date:- 26.05.2023.

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*Deputy Registrar,  
Academic Section*

**Copy forwarded with compliments to :-**

- 1] **The Principal of all concerned Colleges,**  
Dr. Babasaheb Ambedkar Marathwada University,
- 2] **The Director, University Network & Information Centre, UNIC, with a request to upload this Circular on University Website.**

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- 1] **The Director, Board of Examinations & Evaluation, Dr.BAMU,A'bad.**
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**Dr. Babasaheb Ambedkar Marathwada University,  
Chatrapati Sambhajinagar**



**Course Structure and Syllabus  
Of  
Second Year (III & IV Semester)  
(Outcome based Curriculum)**

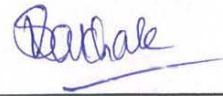
**Undergraduate Bachelor Degree Program  
In  
B. Sc. (Home Science)**

**Choice Based Credit System  
(Effective from Academic Year 2023-24)**

  
11/05/23

Dean  
Faculty of Science & Technology  
Dr. Babasaheb Ambedkar Marathwada  
University, Aurangabad

Syllabus Section



Chairman  
Adhoc Board  
(B.Sc. Home Sci.)



**Course Structure and Scheme of Examination**

Semester III								
	Course Code	Course Title	Teaching Time /week	Credits	Scheme of Examination			
					Max Marks	CIA	UA	Min Marks
Core Courses	BHS-311	Communication Techniques in Home Science (Theory Paper-V)	2 hours	2	50	10	40	20
	BHS-312	Dyeing & Printing (Theory Paper-VI)	2 hours	2	50	10	40	20
	BHS-321	Communication Techniques in Home Science-Practical	3 hours	1.5	50	10	40	20
	BHS-322	Dyeing & Printing Practical	3 hours	1.5	50	10	40	20
	BHS-313	Family Dynamics (Theory Paper-V)	2 hours	2	50	10	40	20
	BHS-314	Principles of Art & Design (Theory Paper-VI)	2 hours	2	50	10	40	20
	BHS-323	Family Dynamics-Practical	3 hours	1.5	50	10	40	20
	BHS-324	Principles of Art & Design – Practical	3 hours	1.5	50	10	40	20
	BHS-315	Family Economics & Consumer Education (Theory Paper-V)	2 hours	2	50	10	40	20
	BHS-316	Bakery & Confectionary (Theory Paper-VI)	2 hours	2	50	10	40	20
	BHS-325	Family Economics & Consumer Education -Practical	3 hours	1.5	50	10	40	20
	BHS-326	Bakery & Confectionery-Practical	3 hours	1.5	50	10	40	20
	Skill Enhancement course (SEC-1)	BHS-313	SEC-1 Any one skill to be chosen out of two SEC-1(A), SEC-1 (B)	2 hours	2	50	10	40
Ability Enhancement compulsory courses (AECC-3)	BHS-331	Communication skills in English-III	3 hours	3	50	10	40	20
	BHS-332	Marathi/Hindi/Urdu/Sanskrit A student can opt for any one of these languages (SL-III)	3 hours	3	50	10	40	20
Additional credits			2 hours	2*	50	10	40	20
				38	29	750	150	600
<b>Total Credits for Semester III : 29 (Theory : 20; Laboratory : 9)</b>								



Semester IV								
	Course Code	Course Title	Teaching time/week	Credits	Scheme of Examination			
					Max Mark	CIA	UA	Min Marks
	BHS-411	Food Hygiene & Sanitation (Theory Paper-VII)	2 hours	2	50	10	40	20
	BHS-412	Meal Management (Theory Paper-VIII)	2 hours	2	50	10	40	20
	BHS-421	Lab course 4 (Based on BHS-411)	3 hours	1.5	50	10	40	20
	BHS-422	Lab course 5 (Based on BHS-412)	3 hours	1.5	50	10	40	20
	BHS-413	Human Development (Adolescence, Adulthood & Old Age) (Theory Paper-VII)	2 hours	2	50	10	40	20
	BHS-414	Apparel Designing & Construction (Theory Paper-VIII)	2 hours	2	50	10	40	20
Core Courses	BHS-423	Lab course 4 (Based on BHS-411)	3 hours	1.5	50	10	40	20
	BHS-424	Lab course 5 (Based on BHS-412)	3 hours	1.5	50	10	40	20
	BHS-415	Early Childhood Care & Education (Theory Paper-VII)	2 Hours	2	50	10	40	20
	BHS-416	Housing And Interior Decoration (Theory Paper-VIII)	2 hours	2	50	10	40	20
	BHS-425	Lab course 4 (Based on BHS-411)	3 hours	1.5	50	10	40	20
	BHS-426	Lab course 5 (Based on BHS-412)	3 hours	1.5	50	10	40	20
Skill Enhancement course (SEC-2)	BHS-413	SEC-2 Any one skill to be chosen out of two SEC-2(C), SEC-2 (D)	2 hours	2	50	10	40	20
Ability Enhancement compulsory courses (AECC-4)	BHS-431	Communication skills in English-IV	3 hours	3	50	10	40	20
	BHS-432	Marathi/Hindi/Urdu/Sanskrit A student can opt for any one of these languages (SL-IV)	3 hours	3	50	10	40	20
Additional credits		Environmental & Science	2 hours	2*	50	10	40	20
			38	29	750	150	600	
<b>Total Credits for Semester IV : 29 (Theory : 20, Laboratory : 9)</b>								



**Curriculum: Semester – III**

**Syllabus of B.Sc. Home Science (Second Year)**

**SEMESTER-III**

**Communication Techniques in Home Science (Theory)**

Code No. : BHS-311

Max. Marks : 50

Hrs/wk. : 2

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**Course Objectives**

This course will make students understand

- The concept and nature of human communication.
- Elements and process of effective communication and methods of communication.
- To gain knowledge of concept and principles of extension.

**Course Learning Outcomes**

After studying the above course students will

- Develop understanding of scope and concepts of human communication.
  - Comprehend the elements and process of effective communication.
  - Grasp understanding about various communication methods and medium.
  - Learn the concept of extension, its philosophy, principles and scope.
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**Unit: I Communication**

- a) Meaning & definition of communication.
- b) Scope and process of Communication.
- c) Types of Communication- upward, downward, horizontal, vertical, and diagonal, verbal nonverbal and oral and written.
- d) Role of effective Communication.

**Unit: II Elements involved in Communication process.**

- a) Communicator, Message channel, Treatment of Message.
- b) Audience and audience response.
- c) Factors affecting the communication process / barriers of communication.

**Unit: III Art of Presentation in Communication.**

- a) Meaning, Basic steps of presentation.
- b) Devices used in effective communication-OHP, Opaque Projector, DVD Player, LCD etc.
- c) Selection, preparation & use of various teaching aids.

### **Unit: IV Cross-Cultural Communication.**

- a) Concept of cultures, function of culture, Impact of culture on communication.

#### Assignment (Any one)

1. Preparation of radio script.
2. Preparation of computerized teaching aid-slide/transparency.

### **Communication Techniques in Home Science (Practical)**

Code No.: BHS-321

Max. Marks: 50.

Hrs/wk.: 3

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#### Preparation of Teaching Aids:

1. Poster
  2. Chart
  3. Flash Cards
  4. Folder/ Brochure
  5. Hand Puppets
  6. PPT.
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#### **Books Recommended**

1. Dahama O.P. and Bhatnagar O.P.: Education & Communication for development oxford and I.B.H. Publishing Co. New Delhi, 1977.
2. J.K. Sing: Mass Media and Information Technology (Issue for 21st Century) Mangal Deep Publication, Jaipur.
3. Kumar K.J.L. Mass Communication in India, Jaico Publising House, Mumbai, 1989.
4. Small shelagh and Carpenter Jebb, Communication in Travel and Tourism- Hodder and Stoughton Ltd. Kenit by page Bros. (Norwich) Ltd., 1990.
5. Leizikar V. Raymond and Petit D. John. "Business Communication", Richard D. Irwin, 1992.
6. R.K. Madhukar, "Business Communication, Vikas Publishing House, New Delhi.
7. K.K. Sinha, Business Communication.
8. "Business Correspondence and report writing", Sharma, RC and Mohan, K, Tata MC Grahill, 1994, "Model Bussiness Letters," Gartside, L, Pitman, 1992.
9. Body Language by Allan Pease, Publisher Sheldon press.



## Syllabus of B.Sc. Home Science (Second Year)

### SEMESTER-III

#### Dyeing and Printing (Theory)

Code No. : BHS-312

Max. Marks : 50

Hrs/wk. : 2

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#### Course Objectives

This course will make students understand

- Knowledge of fundamentals of dyeing and printing on textiles
- The application of different dyes on various textile substrates

#### Course Learning Outcomes

After studying the above course students will

- Understand the terminology of dyeing.
- Identify various types of dyes and for dyeing and printing of fabrics.
- Describe methods and styles of printing fabrics.

#### Unit: I Introduction

- a) Introduction to Dyeing.
  - b) Classification of Dyes.
    - 1) Plant Dyes
    - 2) Animal Dyes
    - 3) Mineral Dyes
    - 4) Synthetic Dyes-Direct, Acid, Basic, Vat, Naphthol, Mordant, Reactive Sulphur, Dispersed, Mordant.
  - c) Selection of Suitable Dyes
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#### Unit: II Dyeing Methods

- a) Fiber Dyeing
- b) Yarn Dyeing
- c) Piece Dyeing
- d) Advantages & Disadvantages of Different dyeing methods.

#### Unit-III Printing

- a) Significance of Printing
- b) Methods of Printing- Block Printing, Screen Printing, Stencil, Roller Printing, Discharge Printing, Resist Printing. Tie & Dye & Batile.
- c) Seasonal activities- Preparation of an either apparel household by using any of the Printing Methods.
- d) Dyeing & Printing

## **Dyeing and Printing (Practical)**

Code No.: BHS-322

Max. Marks: 50.

Hrs/wk.: 3

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### 1. Preparation of Samples.

- a) Tie & Dye (any five techniques)
- b) batik
- c) Block Printing
- d) Screen Printing

### 2 Dying Fabric Sample with various dyes.

- a) Direct dyes
- b) Vat dyes
- e) Sapling dyes
- d) Acid dyes
- e) Dispersed dyes

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### **Books Recommended for Theory & Practical**

1. Household textiles and laundry- Durga Deulkam.
2. Yeret Book of Clothing & Textile- Sushma Gupta, Neru Garg, Renu Saini & Kalyani Publication, Delhi.
3. Textiles fiber to fabric- Bemand P. Corbman.
4. Manual of Dyes and Fabrics Thames & Hudson.
5. Textiles fifth edition- Norma Hollen, Janc, Saddler Anna L. Longford, Macmillan Publishing co. Inc. New York.
6. Nora Provd-Simple Textile Dyeing & Printing, Batford Ltd. London.
7. Dorothy Siegart, Lyle modern Textiles, John wiky and Sons. Inc. New York.
8. Nisbet H-Gramner of Textile Design, Taraporwala & Sons, Bombay.



**Syllabus of B.Sc. Home Science (Second Year)**  
**SEMESTER-III**  
**Family Dynamics (Marriage & Family Relationship) (Theory)**

Code No.: BHS-313

Max. Marks: 50.

Hrs/wk.: 2

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**Course Objectives**

This course will make students understand

- The significance and cohesiveness of family.
- The significance of family planning.
- The impact of broken family on the psychology of a person.

**Course Learning Outcomes**

After studying the above course students will

- Understand the family structure, family planning and marriage issues.
- Understand the significance of different parent-child relationship and Parenting styles.
- The students will be aware about various Laws related to marriage and family

**Unit-I Marriage**

- a) Readiness for Marriage, meaning, definition, purpose, motives and types of marriage

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**Unit-II Marital Problems.**

- a) Marital disharmony, personal compatibility and adjustments in marriage changing roles in marriage.

**Unit-III Family**

- a) Orientation of family studies, origin, evolution, meaning and definition.  
b) Laws related to marriage and family  
c) Dowry System.

**Unit-IV Family life cycle.**

- a) Stages, family disorganization- its causes and consequences, single parent families  
b) Marriage and family counselling  
c) Agencies working for women

**Assignment: Study report writing on any two.**

1. Single parent family.
2. Family with working woman.
3. Impact of modernization on marital harmony.

**Family Dynamics (Marriage & Family Relationship)  
(Practical)**

Code No.: BHS-323  
Hrs/wk.: 3

Max. Marks: 50.

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1. Study on awareness related to laws for women.
2. Study of interests of the young adults
3. Interviewing families of different background for understanding changing functions of families.
4. Group discussion on need for preparation for marriage.
5. Role and Functions of Marriage Bureau.

**Books Recommended**

1. Building successful Marriage-Laudies, J.J. & Laudis M.G., 1968, Pentice Hall, London.
2. Psychology of adjustment- Kaplan PS, & Stein J, 1984, Wadsworth, California,
3. Intimate Relationships, Marriage and the Family-Coleman J.C. (1986), Chicago, Macmillan Publication Company.
4. Marriage and family in India, Kapdia KM. (1966), Oxford University Press.
5. The family in Transition- Augustine, J.N. (Ed), 1982, Vikas Publishing House, New Delhi.
6. Research in families with problems in India- TISS (1991) Vol. I & II, Bombay, TISS
7. Divorce its causes and consequences in Hindu Society- Pothen's 1986, Vikas, New Delhi.
8. Marriage, the family & women in India- Rao, V.V.P. & Rao, V.N. Heritage Publication, 1982, New Delhi.
9. Legal Rights for women & Families- Verma, U.S. & Singh, M. (1988), New Delhi, Women's Legal Aid Centre.



## Syllabus of B.Sc. Home Science (Second Year)

### SEMESTER-III

#### Principles of Art & Design (Theory)

Code No.: BHS-314

Max. Marks: 50.

Hrs/wk.: 2

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#### Course Objectives

This course will make students understand

- Comprehension on the nuances of art & design, art & design elements, and principles
- Understand design organization for optimum comfort and functionalism.
- Evaluate design for aesthetic and ergonomic feasibility.

#### Course Learning Outcomes

After studying the above course students will

- Practicing knowledge gained on selection of principles.
- Comprehend the concept of design applicable to interior spaces.
- Appreciate principles of design and the contributing factors and refine personal aesthetic senses
- Understand the application of materials & finishes to create aesthetic & sustainable interiors.

#### Unit: I

- a) Elements of art
  - b) Principles of design:
  - c) Application of art principles in homes
- 

**Unit: II:** Colour, properties of colour: hue, value and intensity; colour schemes

**Unit III:** Study of accessories, Table setting for various occasions.

#### Assignment

1. Conduct the market survey on availability of accessories and write report
2. Prepare an illustrative report on colour schemes/principles of design/art elements

#### Principles of Art & Design (Practical)

Code No.: BHS-324

Max. Marks: 50.

Hrs/wk.: 3

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1. Study of elements of Art
2. Developing designs through use of principles of design
3. Drawing colour wheel
4. Planning colour schemes for different rooms

5. Table setting, napkin folding

**Books Recommended for Theory & Practical**

1. Varghese MA, NN. Ogale and K. Srinivasan, 1989. Home Management for standard XI, Wiley Eastern
2. Soundararaj, S.1975 Household Arts
3. Bhatt P. and S. Goenka 1999 Foundation of Art and Design. The Lakhani Book Depot, Sunder Bhavan, Mumbai
4. Goldstein H. And V.Goldstein 1958 Art in everyday life 4 edition The Mac Millan co. Joshi C. and S Phadke Art of Table Setting Dept of FRM S.V.T. College of Home Science, Mumbai.



## Syllabus of B.Sc. Home Science (Second Year)

SEMESTER-III

### Family Economics & Consumer Education (Theory)

Code No.: BHS-315

Max. Marks: 50.

Hrs/wk.: 2

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#### Course Objectives

This course will make students understand

- Comprehension on the nuances of art & design, art & design elements, and principles
- Understand design organization for optimum comfort and functionalism.
- Evaluate design for aesthetic and ergonomic feasibility.

#### Course Learning Outcomes

After studying the above course students will have knowledge of

- Having an opportunity to learn about the practical aspects of money management.
- About the importance of money savings, investment and insurance.
- Consumers rights and fighting against unfair trade practices of the traders and manufacturers.

**Unit I:** Meaning and scope of family finance management; family income: definitions, characteristics, its types and factors affecting family income and expenditure

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**Unit II:** Budgeting: steps and types of family budget, Engel's law of consumption; account keeping and record keeping

**Unit III:** Planning for family's financial security, savings, investments, and insurance; taxation; will

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#### Unit IV:

1. Consumer: definition and role, consumer problems, consumer Education; consumers rights and responsibilities
2. Unfair trade practices: adulteration, faulty weights and measures etc
3. Sources of consumer information: advertisements, labels, packages etc., consumer protection laws.

#### Assignment

1. Prepare personal family budget.
2. Write down the report on consumer problems

## Family Economics & Consumer Education (Practical)

Code No.: BHS-325

Max. Marks: 50.

Hrs/wk.: 3

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1. Survey on Family Budget.
2. Study of different saving schemes available in Banks.
3. Study of different saving schemes available in Post Office.
4. Study on any five types of Insurance.

### Books Recommended

1. P. Seetharaman and M. Sethi 202. Consumerism Strategies and Tactics CBS publishers & Distributors, New Delhi
2. Gross & Crandall "Management for Modern families, Meredith Publishing Co. Park Avenue South, New York.
3. Nickell P & Dorsey J.M. "Management in family living, Laguna Hills, California.
4. Mann M.K. "Home Management in Indian Families, Kalyani Publisher, Ludhiyana.
5. Varghese MA, NN. Ogale and K. Srinivasan, 1989. Home Management for standard XI, Wiley Easter Ltd



**Syllabus of B.Sc. Home Science (Second Year)**  
**SEMESTER-III**  
**Bakery and Confectionary (Theory)**

Code No.: BHS-316  
Hrs/wk.: 2

Max. Marks: 50.

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**Course Objectives**

This course will make students understand

- The role of different ingredients used in bakery
- Explain the different working temperatures for bakery products
- The faults and remedies of bakery and confectionery products
- The equipment's and tools used in bakery and confectionery product manufacturing.

**Course Learning Outcomes**

After studying the above course students will able to:

- Develop skill in various baking procedures;
- Know application of various kinds of ingredients used in baking;
- Have working knowledge of equipments needed for baking;
- Start a small bakery unit at home.

**Unit I: Ingredients used in Bakery and Confectionary.**

- a) Selection of Ingredients.
  - b) Properties of Ingredients:
  - c) Functions of Ingredients.
- 

**Unit II: Bread Making**

- a) Methods of Bread making.
- b) Faults in bread.
- c) Remedies and reasons.

**Unit III: Biscuit making**

- a) Methods of Biscuit Making
- b) Faults & remedies.
- c) Quality characteristics.

**Unit IV: Cake and pastry making.**

- a) Methods of cake making.
- b) Characteristics of good cake.
- c) Faults and remedies.

**Unit V: Confectionery.**

- a) Stages of syrup.
- b) Characteristics of confectionery products.
- c) Faults and remedies.

**Unit VI: Packaging of bakery & confectionary products.**

- a) Machinery for bakery unit.
- b) Machinery for confectionary unit.

**Bakery and Confectionary (Practical)**

Code No.: BHS-326

Max. Marks: 50.

Hrs/wk.: 3

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1. Bakery and Confectionary Equipments.
2. Quality checking of raw material.
3. Bread Preparation.
4. Bun/Pav Preparation.
5. Bread Roll, Dough nut, Pizza.
6. Biscuit Preparation-Sweets Salty.
7. Cake Preparation
8. Preparation of Chocolates & Toffee.

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**Books Recommended for Theory & Practical**

1. Bakery Science and Cereal Technology- Khetarpaul.
2. Technology of Cereals-Kent.
3. Bread- Sponsor.
4. Flour Milling Process-Scott.
5. Sugar Confectionery and Chocolate Manufacture- R. Less and E.B. Jackson.
6. Industrial Chocolate Manufactory and Use- S.T. Becikelt.
7. Chocolate, Cocoa & Confectionery Science and Technology- Bernard W. Minifie.
8. Basic Baking- S.C. Dubey



## Syllabus of B.Sc. Home Science (Second Year)

### SEMESTER-IV

#### Food Hygiene and Sanitation (Theory)

Code No.: BHS-411

Max. Marks: 50.

Hrs/wk.: 2

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#### Course Objectives

This course will make students understand

- The concepts of food hygiene and sanitation and their role in food industry
- Gain an understanding of food hygiene and sanitation during food unit operations.
- Food borne illness and route of infection.
- Techniques of maintain Hygiene& Sanitation

#### Course Learning Outcomes

After studying the above course students will able to:

- Define the terms food safety, food poisoning, foodborne illness, contamination, cross contamination, potential hazardous food hazard, GMP, HACCP.
  - Describe the best practices to ensure the proper hygiene.
  - Conduct ISO, GMP, HACCP and other mentoring system and quality control.
  - Keeping accurate staff training records.
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**Unit I:** Hygiene-Importance and application of personal hygiene. Sanitation meaning and importance

**Unit II:** Hygiene and Sanitation in Food Sector-General Principles of Food Hygiene, general hygiene practices for commodities, equipment, work area

**Unit III:** Water Supply Sources, Impurities & Purification of Water

**Unit: IV:** Food borne infections, Control methods for maintaining sanitation.

**Assignment:** Visit any one catering institute and prepare of case study report on:  
Food preparation Centre/serving Centre/storage Centre

## **Food Hygiene and Sanitation (Practical)**

Code No.: BHS-421

Max. Marks: 50.

Hrs/wk.: 3

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1. Examination of Physical Hazard.
2. Examination of Chemical Hazard.
3. Study the techniques of Good Manufacturing Practices (GMPs) and personal hygiene
4. Study the Swab Method for packaging material.
5. Study the Swab Method for personal hygiene.
6. Study CIP techniques
7. Preparation of different sanitizers & detergents for cleaning purpose.

### **Books Recommended**

1. Food Safety by Bhatt & Rao
  2. Safe Food Handling by Hobbs Betty
  3. PFA Rules.
  4. Food Microbiology by Frazier W.C, & Westhoff, D.C.-4th ed. 1988 Newyork.
  5. Basic Food Microbiology by Baanwart, G.J. (1987) CBS Publishers, New Delhi.
  6. Theodore Hough- Elements of Hygiene and Sanitation.
  7. David Mcswane, Nancy R. Rue- The Essentials of Food Safety and Sanitation
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## Syllabus of B.Sc. Home Science (Second Year)

SEMESTER-IV

### Meal Management (Theory)

Code No.: BHS-412

Max. Marks: 50.

Hrs/wk.: 2

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#### Course Objectives

This course will make students understand

- The principles of planning nutritionally adequate meals and acquiring knowledge about the nutritional needs and concerns of an individual throughout the life cycle.
- To make them exercise food choices consonant with good health based on sound knowledge of principles of nutrition.
- To provide an overview of nutrition considerations during special conditions for children and adults.

#### Course Learning Outcomes

After studying the above course students will able to:

- Comprehend the principles of planning nutritionally adequate meals/diets.
  - Acquire knowledge about the nutritional needs and concerns of an individual throughout the life cycle.
  - Exercise food choices consonant with good health based on sound knowledge of principles of nutrition.
  - Understand nutrition considerations during special conditions for children and adults.
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#### Unit I: Introduction to Meal Management.

- a. Importance of RDA and use of food composition tables in Meal Planning
  - b. Definition & Importance of Meal Planning
  - c. Factors & Influencing Meal Planning.
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#### Unit II: Nutrition during adult hood

- a. Adult Male and Female- Balanced diet, RDA.
- b. Nutritional requirements during pregnancy & Lactation.

#### Unit III: Nutrition during childhood.

- a. Infancy- Breast Feeding artificial feeding weaning, supplementary feeding, RDA.
- b. Preschool (2-6 Years), School going (6-12 years) & adolescence (13-18 years) food habits. Nutritional requirement.

#### Unit IV: Nutrition during old age: Changes during old age nutritional requirements.

#### Assignment

- a. Case study on meal pattern pregnant women.

b. Packed meal for various age groups considering nutritional requirements

### **Meal Management (Practical)**

Code No.: BHS-422

Max. Marks: 50.

Hrs/wk.: 3

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1. Meal planning for adult male considering Physical activity & Income group.
2. Meal planning for adult female considering Physical activity & Income group.
3. Meal planning for pregnant & Lactating woman considering Physical activity & Income group
4. Meal planning for infant-preparation of weaning & supplementary
5. Meal planning for preschool, school going & adolescent girl and boy.
6. Meal planning for old age.

### **Books Recommended for Theory & Practical**

1. Applied Nutrition-R. Rajlaxmi.
2. Food Science by B. Sri Lakshmi, New Age International (P), Ltd., New Delhi. 3. Nutritive value of Indian foods- Gopalan C, Ramashastri B.V. & Balasubramaniam, NIN, Hyderabad.
4. Food Science-Potter.
5. Textbook of Human Nutrition- Bamji, M.S. & Rao, N.P.
6. Food Science, Chemistry & Experimental Foods- Dr. M. Swaminathan.
7. Essentials of Food & Nutrition- Dr. M. Swaminathan,
8. Normal & Therapeutic Nutrition by Robinson CH & Lawers MR. 9. Text Book of Food Science, Nutrition and Dietetics- Begum, R.
10. Nutrition Science- Srilakshmi. B., III Edition, New Age International Publishers, New Delhi.
11. A Text Book of Nutrition-Chintapalli Vidya, New Delhi: Discovery Publishing House.



## Syllabus of B.Sc. Home Science (Second Year)

### SEMESTER-IV

#### Human Development (Adolescence, Adulthood & Old age) (Theory)

Code No.: BHS-413

Max. Marks: 50.

Hrs/wk.: 2

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#### Course Objectives

This course will make students understand

- To develop an understanding about the discipline of Human Development
- Study the different domains of development in adolescence, adulthood and old age - physical, cognitive, language and socio-emotional
- Get familiarized with the use of different techniques of studying various domains of development in adolescence, adulthood and old age.

#### Course Learning Outcomes

After studying the above course students will able to:

- Develop an understanding about the discipline of Human Development.
- Explain different domains of development in adolescence, adulthood and old age - physical, cognitive, language and socio-emotional.
- To familiarize the students in use of different techniques of studying various domains of development in adolescence, adulthood and old age

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#### Unit I: Early Adolescence (12-16 years)

- a) Puberty-growth, primary and secondary sexual characteristics, Parent-Child conflict.
- b) Identity-Psychological response to Puberty gender differences.

#### Unit II: Late adolescence (16-18 years)

- a) Concept and characteristics- Physical, Social and emotional
- b) Developmental tasks.
- c) Influence of peers.
- d) Cognitive development- Piaget's formal operations, reasoning, moral reasoning and judgment.

#### Unit III: Young adult (19-40)

- a) Definition, developmental tastes, significance of the period, responsibilities and adjustment, new family, work place, parenthood, financial matters and sex role issue.

#### Unit: IV: Middle adulthood

- a) Definition, Physical changes, menopause, stress in middle age, coping with stress at work place and family
- b) Job satisfaction and preparing for retirement.

**Unit V: Old age (late adulthood)**

- a) Definition, Physiological changes, health problems, cognitive and memory changes.
- b) Retirement- Effect on self, family and society.
- c) Recreational interests of the aged.
- d) Problems of old age and coping strategies

**Human Development (Adolescence, Adulthood & Old age) (Practical)**

Code No.: BHS-423

Max. Marks: 50.

Hrs/wk.: 3

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1. Assessment of academic and social adjustment of adolescents.
2. Assessment of intelligence and personality of adolescents and young adults using standardized tests.
3. Survey on Parent child relationship with adolescents.
4. Visits to Old age home and preparation of report.

**Books Recommended**

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1. Developmental Psychology-Elizabeth Hwlock, 5 Edition, 1981, Tata Mcgraw Hill Publication Company, New Delhi.
2. Adolescent Development- Elizabeth Hurloc, 5 Edition, 1981, Tata Mcgraw Hill Publication Company, New Delhi.
3. Child Development- Berk L.E. &1996), Prentice Hall, New Delhi.
4. The Psychology of Adolescent- Jersid A.T., 7 edition prentice Hall INC, Englewood Cliffs N.J., U.S.A.



## Syllabus of B.Sc. Home Science (Second Year)

### SEMESTER-IV

#### Apparel Designing & Construction (Theory)

Code No.: BHS-414

Max. Marks: 50.

Hrs/wk.: 2

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#### Course Objectives

This course will make students understand

- A keen eye for assessing fit in clothes
- A level of proficiency in making patterns for simple garments
- Handling of special fabrics.
- Garment details and suitability of different fabrics for different garments.

#### Course Learning Outcomes

After studying the above course students will able to

- Apply the knowledge of fabrics and fabric terminology to follow preparatory steps before garment cutting
- Use and apply the concept and techniques of pattern making, laying out and cutting
- Have skill and command in basic pattern making for children and women's clothes
- Apply the learnt concept of fit evaluation

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#### Unit I: Methods of Clothing Construction.

1. Drafting
2. Flat Pattern Method
3. Draping Method.
4. Marking Details-Cutting Line, Stitching Line, cloth direction, pleats, home, width, pattern details.

#### Unit II: Design elements and principles as applied to clothing and apparel construction.

1. Line, texture, colour, space
2. Balance, Harmony, Rhythm, Preparation, Emphases

#### Unit III

1. Selection of Clothing for different age group & occasions.
  - a) Infants, toddlers, preschool, school going, teenagers, adults, old age.
  - b) Casual wear, office wear, sports, party, seasonal work.
2. Wardrobe planning
3. Renovation of garments- darning, patching, alterations.

**Unit IV:** Fitting Problems & their remedies related to Neck, Shoulders, Armhole, bust line, back, waist, crotch.

#### Seasonal:

1. Sketching of figures with western & traditional costumes.
2. Sketching of accessories- jewelry, bags, foot wear etc.

## **Apparel Designing & Construction (Practical)**

Code No.: BHS-424

Max. Marks: 50.

Hrs/wk.: 3

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1. Making sample of different types.
  - a) Sleeves- plain, puff, bell, leg 'o', mutton.
  - b) Collars-shirt, peterpan, stand, roll, collar.
2. Garments.
  - a) Salwar/chudidar
  - b) Kurta
  - c) Saree Blouse
  - d) Night gown.

### **Books Recommended for Theory & Practical**

1. Know about fabric and their manufactures- K. Thomas
2. Household textiles and laundry- devega Dewlkac
3. A complete guide to fashion designing- Jenny Davis
4. Text book of clothing & Textiles by Sushma Gupta, Neru garg, Renu sani, Kalyani Publishers, Gedhan.
5. Tarapkar-Complte guide to stitches- Vol. I & II- Zarapkar, Navneet Publication, Mumbai.
6. Clothing for modern-Erwin M.D.
7. Fashion design & Product development- Lou Harold & Pomerony John, 8. Know about fabric & their manufacturing-K- Thomas.



## Syllabus of B.Sc. Home Science (Second Year)

### SEMESTER-IV

### Early Childhood Care & Education-II (Theory)

Code No.: BHS-415

Max. Marks: 50.

Hrs/wk.: 2

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#### Course Objectives

This course will make students understand

- To study the contemporary emergence and positioning of Early Childhood Care and Education
- To provide analytical framework for pedagogy and curricular framework
- To understand effective implementation and assessment of early childhood development programmes for fostering optimal growth of young children

#### Course Learning Outcomes

After studying the above course students will able to

- The student will acquire skills in observing and documenting the developmental needs of children from birth to 6 years of age in different contexts
- They can delineate the significance of stimulating environment for fostering holistic development and assess developmental indicators using tools and checklists.
- The students will develop skills in planning and creating development and programmatic activities with respect to all domains of development for children in first six years of life.
- The student will develop skills in creating learning materials and use them in family and community in multiple contexts

#### Unit I: Curriculum Planning.

- a. Purpose, Principles, Factors Influencing Planning short term and long term Planning
- b. Principles of Learning- Incidental & Planned learning, Project Method.
- c. Resource Units-Setting goals, making plans, lesson Plans (aims and objectives).
- d. Environment for learning, learning centers
- e. Creative activities- Functions, materials, required role of pre-school worker in art activities such as painting, finger painting, blocks, clay works water play, sand play, cutting & pasting and pupil show.
- f. Language-Goals of language, types of listening and development of listening skills.
- g Routine activities, storytelling, music, rhymes, creative activities, field trips, reaching programs, festival, and celebrations.
- h. Preparation & use of leaching aids in nursery school.
- i. Use of audio-visual aids, charts, posters, models et.

**Unit II: Organization set-up.**

- a) Administrative set-up and function of personal working at different levels.
- b) Pre-school building-site, location, elements of a building, plans for various types of activities, space allotment for indoor and out-door play.
- c) Play equipment- Principles of selection of equipment for child's developments, care and use of play equipment.
- d) Roles and responsibilities and essential qualities of teachers and other personal.
- e) Essential records and reports.

**Unit III: Parent and Community Education,**

- a) Need and Aspects of Parent Education.
- b) Need for Community Education & influence of neighborhood & community on the child.
- c) Methods and techniques of communicating with parents. Parent-teacher meetings.

**Early Childhood Care & Education-II (Practical)**

Code No.: BHS-425

Max. Marks: 50.

Hrs/wk.: 3

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1. Routine (Regular) visits nursery school to observe infrastructural set-up, teaching methods and other activities.
2. Participation Planning for a 3-hour nursery school including four basic activities- informal talk, thyme, story, creative activity.
3. Preparation of tools considering the need of that particular nursery school. The tools can be educational or useful in promoting particular development of a child.
4. Maintaining record of the entire years practical work.
5. Preparation of teaching aids such as chart, flannel board, cut outs for stories and concept- actual use of the flannel cutouts. Flash cards, puppets-finger, rod and glove etc.

**Books Recommended for Theory & Practical**

1. Theory and principles of education- Bhatia & Bhatia (1995), Doaba House, Delhi.
2. Introduction to early childhood education- Brewes, J.A. 3<sup>rd</sup> Edition, Boston: Ahyn & Bacon,
3. Early Childhood Education Programmer: Kaul V. (1997), NCERT, New Delhi.
4. Early Childhood Care & Education: Mobate & Mahate (1996) New Delhi, Deep & Deep Publication
5. The Nursery School: Read Katherine (1980), Halt Richard & Winston.
6. How to run a Balwadi: Wagh Anutai, Thane, Gram Balshikshan, Kendra.



## Syllabus of B.Sc. Home Science (Second Year)

### SEMESTER-IV

#### Housing and Interior Decoration (Theory)

Code No.: BHS-416

Max. Marks: 50.

Hrs/wk.: 2

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#### Course Objectives

This course will make students understand

- The structural components of a building and comprehend building bye-laws and their applications in designing residential units
- Evaluation and presentation of plans or layout drawings for interior and exterior spaces
- Different of building materials and their characteristics
- Different types of flower arrangements

#### Course Learning Outcomes

After studying the above course students will able to

- Understand various structural components of a building.
- Comprehend building bye-laws and their applications in designing residential units.
- Identify different types of building materials and their characteristics.
- Gain skill in the preparing house plans.
- Gain skill in flower arrangements

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**Unit: I** 1. Housing and its importance, factors affecting the housing needs of the family  
2. House planting selection of site, factors affecting the planning of a house.

**Unit II:** Ownership versus renter ship of house, house wiring, building bye laws

**Unit III:** Functional designing of work areas and storage/space management, economy in constructing a house.

**Unit IV:** Furniture classification, selection and arrangement,

**Unit V:** Selection of Different types of material for flower arrangement and study of different types flower arrangement

#### Assignment

1. Survey report of residents from own/rented houses
2. Report on illustrative collection of flower arrangements

#### Housing and Interior Decoration (Practical)

Code No.: BHS-426

Max. Marks: 50.

Hrs/wk.: 3

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1. Drawing of Architectural symbols;

2. Drawing of rooms/house plans for different income levels, home,
3. Planning efficient work areas and storage facilities in the
4. Drawing layout of different types of kitchens
5. Arrangement of furniture for different rooms with the help of paper cut outs (Furniture templates)
6. Flower arrangement

**Books Recommended for Theory & Practical**

1. Deshpande R.S. 1978 "Modern Ideal homes for India United Book corporation Poona
2. Deshpande R.S. 1971 "Building your own home" United Book corporation Poona
3. Mann M.K. 1984 "Home Management for Indian families" Kalyani Publishers New Delhi
4. Varghese MA, NN. Ogale and K.Srinivasan, 1989. Home Management for standard XI, Wiley Eastern Ltd
5. De Van and Dorody 1964 Introduction to Home Furnishing, New York, Mac Millan Co.



**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,**

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**Faculty of Science & Technology**

**Home Science Practical Question Paper (CBGC) 2023**

**B. Sc Second Year Practical Examination (Semester III & IV)**

**Course Title – Communication Techniques Practical +Food Hygiene & Sanitation Practical**

**Course code-321 & 421**

**Time: 4 Hour**

**Mark : 80**

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Q.1 Prepare the poster on social message .	20
Q.2 Write down the swab method for Packaging material .	10
Q.3 Explain the CIP Techniques .	20
Q.4 Discuss the techniques of good manufacturing (GMP) .	20
Q.5 Viva – Voce .	10

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**Home Science Practical Question Paper (CBGC) 2023**

**B. Sc Second Year Practical Examination (Semester III & IV)**

**Course Title – Dyeing & Printing Practical + Meal Management Practical**

**Course code – 312 & 422**

**Time: 4 Hour**

**Marks: 80**

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Q.1 Prepare of sample . Batik / Tie & Dye/ Block Pring	20
Q.2 Prepare the sample using dyes. 1. Vat Dyes 2. Sapling Dyes.	20
Q.3 Meal Planning, Preparation and Calculation of teenagers/ adult male considering physical activity/adult female of anyone income group.	30
Q.4 Viva – Voce.	10

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**Home Science Practical Question Paper (CBGC) 2023**

**B. Sc Second Year Practical Examination (Semester III & IV)**

**Course Title – Family Dynamics Practical + Human Development Practical**

**Course code- 313 & 413**

**Time: 4 Hour**

**Mark : 80**

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Q.1 write down the report of visit to marriage bureau.	20
Q.2 Discuss need for preparation for marriage.	10
Q.3 Write down the report of visits to old age home.	20
Q.4 Write the report on parent child relationship with adolescents.	20
Q.5 Viva –Voce .	10

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**Home Science Practical Question Paper (CBGC) 2023**

**B. Sc Second Year Practical Examination (Semester III & IV)**

**Course Title – Principles of Art & Design Practical + Apparel Designing & Construction  
Practical**

**Course code-324 & 424**

**Time: 4 Hour**

**Mark : 80**

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Q.1 Draw colour wheel .	20
Q.2 Prepare colour schemes for different rooms.	20
Q.3 Constuction of Anyone Garment	30
Q.4 Viva – Voce.	10

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**Home Science Practical Question Paper (CBGC) 2023**

**B. Sc Second Year Practical Examination (Semester III & IV)**

**Course Title – Bakery & Confectionary Practical + Housing & Interior Decoration Practical**

**Course code- 326 &426**

**Time: 4 Hour**

**Marks : 80**

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Q.1 Preparation of Bun / Pav	20
Q.2 Preparation of chocolate/ toffee.	20
Q.3 Make any one type of flower arrangement.	10
Q.4 Write & draw the floor plan.	20
Q.5 Viva-Voce.	10

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**Home Science Practical Question Paper (CBGC) 2023**

**B. Sc Second Year Practical Examination (Semester III & IV)**

**Course Title – Family Economics & Consumer Education Practical + Early Childhood Care & Education Practical**

**Course code-315 & 425**

**Time: 4 Hour**

**Mark : 80**

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Q.1 Prepare Family budget of any one income group	20
Q.2 Write about the any one types of insurance .	10
Q.3 Preparation of educational play material .	20
Q.4 Demo (Any One).	20
1) Story Telling 2) Song activity 3) Indoor & Out door play 4) Dance activity	
Q.5 Viva-Voce.	

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