

B.Sc., Home Science

| Title of the Course | | FUNDAMENTALS OF ART AND DESIGN | | | | | | | | |
|---|--|--------------------------------|---|---|---|---------|----------|-------|----------|-----------|
| Category | Year | L | T | P | O | Credits | Inst Hrs | Marks | | |
| | Semester - I | | | | | | | CIA | External | Total |
| Course Code | 23BHFA1 | Y | | Y | | 3 | 3 | 25 | 75 | 100 |
| Learning Objectives | | | | | | | | | | |
| To enable the students to: | | | | | | | | | | |
| Understand the elements, principles of design and principles of housing. | | | | | | | | | | |
| Learn the concepts of colour and create colour scheme for interiors. | | | | | | | | | | |
| Learn the application of art principles, elements of design, colour schemes and housing principles in creating aesthetic interiors. | | | | | | | | | | |
| | CONTENT | | | | | | | | | HOURS |
| UNIT I | Introduction to art and design - Importance of design, Application of good taste and Role of good designer. Types of design- Structural and Decorative design. Classification of Decorative Design - Naturalistic, Stylized, Abstract and Geometrical Design. | | | | | | | | | 8 |
| UNIT II | Elements of design - Line and its types – horizontal, vertical, diagonal, curved, zigzag; Shape; Form – 2D&3D, Size, Texture- tactile and visual; light, pattern, Space- positive & negative and Colour-warm and cool. Application of elements to form design. | | | | | | | | | 8 |
| UNIT III | Principles of Design - Harmony – harmony of line, shape, size, texture and ideas. Balance – symmetrical, asymmetrical and radial. Proportion – proportional relationships, Greek oblong and Scale. Emphasis – emphasis through grouping of objects, use of contrast color, decoration, plain background space, unusual lines, shapes, and sizes. Rhythm – achieving rhythm through repetition of shapes, progression of size, continuous line movement, radiation, and gradation. | | | | | | | | | 15 |
| UNIT IV | Colour - Definition, Qualities of colour, Hue, Value, Intensity. Tints and Shades. The colour wheel/systems - Prang colour system, Physicist's Theory, Psychologist's Theory, Harmonies of related colors- Monochromatic, Analogous and Accented Neutral; Harmonies of contrasting colours – Direct, double, split and triad. | | | | | | | | | 8 |
| UNIT V | Housing - Selection of site and functions of house. Basic principles of planning a life space - Orientation, Grouping, Roominess, Lighting, Circulation, Storage Facilities and Privacy. Creating a life space- Factors in planning different rooms – Living Room, Bedroom, Dressing Room, Dining, Kitchen, Study Room, Store room, Bathroom, Utility space, Staircase and Verandah. | | | | | | | | | 8 |
| | Total | | | | | | | | | 60 |

COURSE OUTCOMES

After successful completion of the course the student will be able to:

CO1: Classify design types like structural and decorative design

CO5: Explain the principles in planning a life space

CO2: Use different elements of design appropriately in creating design objects.

CO3: Apply the Art principles in Interior Design.

CO4: Apply colour harmonies in various rooms.

References:

1. Andal. A and Parimalam.P, (2008), “A Text Book of Interior Decoration”, SatishSerialPublishing House.
2. Chaudhari, S.N. (2006), “Interior Design”, Aavishkar Publishers, Jaipur.
3. Goldstein, (1976), “Art in Every Day Life”, Oxford and IBH Publishing House.
4. Kasu, A.A. 2005, “Interior Design”, Ashish Book centre Delhi.
5. P.C. Varghese (2013), “Building Construction”, PHI Learning Private Limited.
6. Premavathy Seetharaman and Parveen Pannu, (2009), “Interior Design and Decoration”, CBS Publishers and Distributors Pvt Ltd. New Delhi.

e-Learning Resources:

- https://www.google.co.in/?gfe_rd=cr&ei=oJE8VvucFMOl8wfe0ZnI Cw#tbm=vid&q=principles+of+design+in+interior+design
- <http://www.docstoc.com/docs/108663367/The-Munsell-and-Prang-Color-Systems>
- <https://www.decorilla.com/online-decorating/transitional-interior-design/>
- <https://www.apartmenttherapy.com/modern-vs-contemporary-vs-minimalist-design-261783>

Mapping with Programme Outcomes

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | L | S | S | S | S | S | M | M | S | S |
| CO2 | S | S | S | S | S | S | S | S | S | S |
| CO3 | S | M | S | S | M | S | S | M | S | S |
| CO4 | S | S | S | S | S | S | M | S | S | S |
| CO5 | S | S | S | S | S | S | S | S | S | S |

Mapping with Programme Specific Outcomes

| CO/PSO | PSO1 | PSO 2 | PSO 3 | PSO 4 | PSO 5 |
|--|------|-------|-------|-------|-------|
| CO1 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 |
| CO5 | 3 | 3 | 3 | 3 | 3 |
| Weightage | 15 | 15 | 15 | 15 | 15 |
| Weighted percentage (rounded of) of Course Contribution to Pos | 3 | 3 | 3 | 3 | 3 |

| Title of the Course | | FUNDAMENTALS OF ART AND DESIGN PRACTICAL | | | | | | | | |
|---|--|--|---|---|---|---------|----------|-------|--------------|-------|
| Category | Year | L | T | P | O | Credits | Inst Hrs | Marks | | |
| | Semester - I | | | | | | | CIA | External | Total |
| Elective - 2 | 23BHFAP1 | Y | | Y | | 3 | 3 | 25 | 75 | 100 |
| Learning Objectives | | | | | | | | | | |
| To enable the students to: | | | | | | | | | | |
| Understand the elements, principles of design and principles of housing. | | | | | | | | | | |
| Learn the concepts of colour and create colour scheme for interiors. | | | | | | | | | | |
| Learn the application of art principles, elements of design, colour schemes and housing principles in creating aesthetic interiors. | | | | | | | | | | |
| | CONTENT | | | | | | | | HOURS | |
| UNIT I | Sketching different types of designs i) Structural Design : Draw the design in the form of size, form, colour and texture. ii) Decorative Design : Draw naturalistic (Photographic print in a wall paper), Conventional design (cartoons), Abstract (Combination of lines), Historic and Geometric (draw or collect squares, circles etc related pictures) | | | | | | | | 12 | |
| UNIT II | Creating Optical illusion in Interiors i) Collect or draw the pictures of different lines and its psychological effect. ii) Collect or draw the pictures formed by combination of shapes iii) Collect or draw the pictures of size iv) Collect or draw the materials of texture. | | | | | | | | 12 | |
| UNIT III | Application of Art Principles in arranging areas in interiors i) Drawing sheet on movement and Harmony ii) Drawing sheet on movement and Balance iii) Drawing sheet on movement and Rhythm iv) Drawing sheet on movement and Emphasis Creating different shapes and types of flower arrangement – Traditional Arrangement, line arrangement, combination of line and mass arrangement, fan arrangement, Crescent, diagonal, horizontal vertical and Ikebana arrangement. | | | | | | | | 12 | |
| UNIT IV | Painting different rooms with various colour harmonies i) Draw prang colour wheel ii) Design sheets of colour scheme effects on Hue, value and Intensity iii) Design sheets of colour scheme on different rooms. iv) Draw psychologic effects of colour scheme. Draw lighting layout and market survey on light and lighting fixtures. | | | | | | | | 12 | |
| UNIT V | Planning layout for different areas in Interiors i) Living room, dining room, bed room ii) Accessories used in rooms. iii) Furniture used in living room iv) Lighting effect in living room | | | | | | | | 12 | |
| | Total | | | | | | | | 60 | |

COURSE OUTCOMES

After successful completion of the course the student will be able to:

CO1: Classify design types like structural and decorative design

CO5: Explain the principles in planning a life space

CO2: Use different elements of design appropriately in creating design objects.

CO3: Apply the Art principles in Interior Design.

CO4: Apply colour harmonies in various rooms.

References:

1. Andal. A and Parimalam.P, (2008), “A Text Book of Interior Decoration”, Satish SerialPublishing House.
2. Chaudhari, S.N. (2006), “Interior Design”, Aavishkar Publishers, Jaipur.
3. Goldstein, (1976), “Art in Every Day Life”, Oxford and IBH Publishing House.
4. Kasu, A.A. 2005, “Interior Design”, Ashish Book centre Delhi.
5. P.C. Varghese (2013), “Building Construction”, PHI Learning Private Limited.
6. Premavathy Seetharaman and Parveen Pannu, (2009), “Interior Design and Decoration”, CBSPublishers and Distributors Pvt Ltd. New Delhi.

e-Learning Resources:

- https://www.google.co.in/?gfe_rd=cr&ei=oJE8VvucFMOl8wfe0ZnI_Cw#tbm=vid&q=principles+of+design+in+interior+design
- <http://www.docstoc.com/docs/108663367/The-Munsell-and-Prang-Color-Systems>
- <https://www.decorilla.com/online-decorating/transitional-interior-design/>
- <https://www.apartmenttherapy.com/modern-vs-contemporary-vs-minimalist-design-261783>

Mapping with Programme Outcomes

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | L | S | S | S | S | S | M | M | S | S |
| CO2 | S | S | S | S | S | S | S | S | S | S |
| CO3 | S | M | S | S | M | S | S | M | S | S |
| CO4 | S | S | S | S | S | S | M | S | S | S |
| CO5 | S | S | S | S | S | S | S | S | S | S |

Mapping with Programme Specific Outcomes

| CO/PSO | PSO1 | PSO 2 | PSO 3 | PSO 4 | PSO 5 |
|---|------|-------|-------|-------|-------|
| CO1 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 |
| CO5 | 3 | 3 | 3 | 3 | 3 |
| Weightage | 15 | 15 | 15 | 15 | 15 |
| Weighted percentage (rounded of) of Course Contribution to Pos | 3 | 3 | 3 | 3 | 3 |

| Title of the Course | | FAMILY MEAL MANAGEMENT | | | | | | | | |
|---|---------------|--|---|---|---|---------|----------|-------|----------|-------|
| Course Code: | | 23BHFA2 | | | | | | | | |
| Category | I Year | L | T | P | O | Credits | Inst Hrs | Marks | | |
| | Semester - II | | | | | | | CIA | External | Total |
| Allied - III | | Y | | Y | | 3 | 3 | 25 | 75 | 100 |
| Learning Objectives | | | | | | | | | | |
| To enable the students to: | | | | | | | | | | |
| 1. Acquire knowledge of the principles of planning diets for various stages of life cycle. | | | | | | | | | | |
| 2. Develop ability to plan balanced diets for various activity groups and for various socioeconomic levels. | | | | | | | | | | |
| UNIT | | CONTENT | | | | | | | | HOURS |
| UNIT I | | Introduction to Meal Management - Balanced diet - food guide, food pyramid. Basic principles of meal planning - objectives - steps in meal planning - food cost. | | | | | | | | 15 |
| UNIT II | | a. Planning balanced diet for different income groups and different category of work – sedentary, moderate and heavy work. b. Nutrition in Pregnancy - physiological stages, food selection - complications of pregnancy. c. Nutrition during Lactation - Physiology of lactation – nutrition requirements, special foods given during lactations. | | | | | | | | 15 |
| UNIT III | | a. Nutrition during Infancy - Growth and development – nutrition requirements - Breast feeding - Infant formula – Introduction of supplementary foods. b. Nutrition during Early Childhood (Toddler/ Preschool) - Growth and Nutritional needs - nutrition related problems. Feeding patterns - acceptance. | | | | | | | | 15 |
| UNIT IV | | a. Nutrition of School Children - Nutritional requirement - Importance of snacks - school lunch. b. Nutrition during Adolescence - Growth development and nutrient needs - food choices, eating habits – factors influencing them. | | | | | | | | 15 |
| UNIT V | | Nutrition during Adulthood and Geriatric Nutrition - Factors affecting food intake and nutrient use - nutrient needs -nutrition related problems. | | | | | | | | 15 |
| | | TOTAL | | | | | | | | 75 |

REFERENCES:

1. Guthrie H.A. and et al. (1986). **Introductory Nutrition**, 6th ed. Times Mirror/Mosby College Pub Louis.
2. Anderson L. et al., (1982). **Nutrition in Health and Disease**, 17th ed. J.B Lippincott Co Philadelphia.
3. Whitney E.N., Hamilton E.N. and Raffles S.R., (1989). **Understanding Nutrition**, 5th ed. West Pub. Co. New York.
4. Recommended Dietary Intakes for Indians, I.C.M.R. 1989.
5. Mudambi, S.R. and M.N. Rajagopal, (2008). **Fundamentals of Food and Nutrition**, 3rd ed. Wiley Eastern Ltc New Delhi-19.
6. Guthrie, H.A, (1989). **Introductory Nutrition**, 6th ed., Times Mirror/Mosby College Publ. - St Louis.
7. Worthington Roberts, Bonnie S and et al., (1985). **Nutrition in Pregnancy & Lactation**, 3rd ed. Times Mirror Mosby College, St. Louis.

Mapping with Programme Outcomes

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | L | S | M | S | L | L | S | S | S |
| CO2 | S | L | S | S | S | M | S | S | M | S |
| CO3 | S | M | S | S | S | M | S | M | M | S |
| CO4 | S | S | S | S | S | M | S | M | M | S |
| CO5 | S | S | S | S | S | L | S | S | M | S |

Mapping with Programme Specific Outcomes

| CO/PSO | PO1 | PO2 | PO3 | PO4 | PO5 |
|---|-----|-----|-----|-----|-----|
| CO1 | 3 | 3 | 1 | 3 | 3 |
| CO2 | 3 | 3 | 1 | 3 | 3 |
| CO3 | 3 | 3 | 1 | 3 | 3 |
| CO4 | 3 | 3 | 2 | 3 | 3 |
| CO5 | 3 | 3 | 1 | 3 | 3 |
| Weightage | 15 | 15 | 6 | 15 | 15 |
| Weighted percentage (rounded of) of Course Contribution to Pos | 3 | 3 | 1 | 3 | 3 |

Mapping with Programme Specific Outcomes

| CO/PSO | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
|---|-------------|-------------|-------------|-------------|-------------|
| CO1 | 3 | 3 | 2 | 2 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 2 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 |
| CO5 | 3 | 3 | 3 | 3 | 3 |
| Weightage | 15 | 15 | 13 | 14 | 15 |
| Weighted percentage (rounded of) of Course Contribution to Pos | 3 | 3 | 3 | 3 | 3 |

| Title of the Course | | EARLY CHILDHOOD CARE AND EDUCATION | | | | | | | | |
|--|--|------------------------------------|---|---|---|---------|----------|-------|----------|-------|
| Course Code: | | 23BHFA3 | | | | | | | | |
| Category | I Year | L | T | P | O | Credits | Inst Hrs | Marks | | |
| | Semester - III | | | | | | | CIA | External | Total |
| Allied - V | | Y | | Y | | 3 | 3 | 25 | 75 | 100 |
| Learning Objectives | | | | | | | | | | |
| To enable the students to: | | | | | | | | | | |
| 1. Understand the need and significance of early childhood care and education, | | | | | | | | | | |
| 2. Develop knowledge and skills in designing the curriculum for children below six years, | | | | | | | | | | |
| 3. Develop an insight into the educational thoughts of Indian and western educationists on ECCE. | | | | | | | | | | |
| UNIT | CONTENT | | | | | | | | | HOURS |
| UNIT I | Concept and Significance of ECCE - Understanding terminologies, “Child”, “Childhood”, and “Early Childhood Care and Education”. Importance and significance of ECCE - Human right perspective. Contributions of Thinkers and Educationists in ECCE - educational thoughts of Frobel, John Dewey, Montessori, Gandhi, Tagore and Aurobindo on understanding of childhood. | | | | | | | | | 15 |
| UNIT II | Policies and Programmes in ECCE in India - ECCE Policy Framework: National Policy on Education (1986), Article 45 in Indian Constitution and 86th Amendment, National Curriculum Framework (2005), National Policy on ECCE (2013); New Education Policy 2020. Programmes and provisions in ECCE in India: ICDS; Rajiv Gandhi Crèche Scheme; ECCE in SSA. | | | | | | | | | 15 |
| UNIT III | Physical arrangements needed for an ideal ECCE centre – Building, site, safety, space; Furniture – types, shapes, safety. Other equipment – play equipment – selection, use and storage. Setting up the learning environment – indoor area, outdoor area, learning activity corners. Quality Standards as per ECCE policy. | | | | | | | | | 15 |
| UNIT IV | Early Childhood Curriculum – Definition and concept of curriculum: Curriculum Approaches – Subject centered, learner centered, community centered. Developmentally Appropriate Practice (DAP) – definition, myths and consequences. Components and essential features of ECCE curriculum. Planning a DAP curriculum – approaches, key principles and types of plans. | | | | | | | | | 15 |
| UNIT V | Organizational Management and Community Involvement Evaluation of ECCE, ECCE professionals - competence, skill and methodology – programmes - infrastructure, safety, school - Maintenance of records. Evaluation of pre school participation. | | | | | | | | | 15 |
| | TOTAL | | | | | | | | | 75 |

REFERENCES :

1. Aggarwal, J. C. (2007). **Early Childhood Care and Education: Principles and Practices**. Shipra: New Delhi.
1. Arni, K. and Wolf G. (1999). **Child Art with Everyday Materials**. TARA Publishing.
2. Fleeer, M. (2010). **Early Learning and Development: Cultural – Historical concepts in play**. Cambridge: Cambridge University Press
3. Kaul, V. (2009). **Early Childhood Education Programme**. National Council of Educational Research and Training. Newdelhi.
4. Mohanty, J. Mohanty, B. (1996). **Early Childhood Care and Education**. Deep And Deep Publication, New Delhi.

5. Muralidharan, R. and Banerji.V. (1989). **A Guide Booklet of Nursery Teachers**, New Delhi : NCERT.
6. Morrison, G. S. (2003). **Fundamentals of Early Childhood Education**. Merrill/Prentice Hall:
7. Virginia Singh, A. (1995). **Playing to Learn: A Training Manual for Early Childhood Education**. M. S. Swaminathan Research Foundation.
8. Swaminathan, M. (1998). **The First five Years**. Sage Publications.

Mapping with Programme Outcomes

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | S | S | M | S | M | S | S | M | S |
| CO2 | S | S | S | M | S | M | S | S | M | S |
| CO3 | S | S | S | M | S | M | S | S | M | S |
| CO4 | S | S | S | M | S | M | S | S | S | S |
| CO5 | S | S | S | M | S | M | S | S | S | S |

Mapping with Programme Specific Outcomes

| CO/PSO | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
|---|------|------|------|------|------|
| CO1 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 |
| CO5 | 3 | 3 | 3 | 3 | 3 |
| Weightage | 15 | 15 | 15 | 15 | 15 |
| Weighted percentage (rounded of) of Course Contribution to Pos | 3 | 3 | 3 | 3 | 3 |

| Title of the Course Course Code: | | EARLY CHILDHOOD CARE AND EDUCATION LAB | | | | | | | | |
|--|---|--|---|---|---|---------|-------------|-------|-----------|-------|
| | | 23BHFAP3 | | | | | | | | |
| Category | I Year | L | T | P | O | Credits | Inst Hrs | Marks | | |
| | Semester - III | | | | | | | CIA | External | Total |
| Allied – VI | | Y | | Y | | 3 | 3 | 25 | 75 | 100 |
| Learning Objectives | | | | | | | | | | |
| To enable the students to: | | | | | | | | | | |
| 1. Understand the need and significance of early childhood care and education, | | | | | | | | | | |
| 2. Develop knowledge and skills in designing the curriculum for children below six years, | | | | | | | | | | |
| 3. Develop an insight into the educational thoughts of Indian and western educationists on ECCE. | | | | | | | | | | |
| UNIT | CONTENT | | | | | | | | | HOURS |
| UNIT I | 1. Visit to an Anganwadi and assess physical infrastructure facilities and resources available in the centre. 2. Visit to a Nursery school and assess physical infrastructure, facilities and resources available in the centre. | | | | | | | | | 15 |
| UNIT II | 1. Identify, plan and record activities and methods of playful interactions to foster development in children birth – 2nd years and two - six years. 2. Methods and tools to assess progress of children – Growth chart and measurement of height, weight and mid arm circumference etc. | | | | | | | | | 15 |
| UNIT III | 1. Prepare a short project on (anyone) : a. Breast feeding practices and problems, b. Supplementary feeding to children, c. Prenatal care, d. Problems in children's growth, e. Childhood illness. 2. Preparation of Language Kits (anyone) : a. Story telling techniques b. Flash cards c. Sequence cards d. Alphabet cards e. Colors and shapes f. Vegetables and fruits cards g. Visual discrimination booklets (pictures of animals, vehicles, etc.) | | | | | | | | | 15 |
| UNIT IV | 1. Prepare a collage on various development 2. Setting up a crèche /preschool. | | | | | | | | | 15 |
| UNIT V | 1. Activities for cognitive development 2. Preparation of story and song books for young children. | | | | | | | | | 15 |
| TOTAL | | | | | | | | | 75 | |

REFERENCES :

1. Muralidharan, R. and Banerji.V. (1989). **A Guide Booklet of Nursery Teachers**, New Delhi : NCERT.
2. Morrison, G. S. (2003). **Fundamentals of Early Childhood Education**. Merrill/Prentice Hall:
3. Virginia Singh, A. (1995). **Playing to Learn: A Training Manual for Early Childhood Education**. M. S. Swaminathan Research Foundation.

Mapping with Programme Outcomes

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | S | S | M | S | M | S | S | M | S |
| CO2 | S | S | S | M | S | M | S | S | M | S |
| CO3 | S | S | S | M | S | M | S | S | M | S |
| CO4 | S | S | S | M | S | M | S | S | S | S |
| CO5 | S | S | S | M | S | M | S | S | S | S |

Mapping with Programme Specific Outcomes

| CO/PSO | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
|---|------|------|------|------|------|
| CO1 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 |
| CO5 | 3 | 3 | 3 | 3 | 3 |
| Weightage | 15 | 15 | 15 | 15 | 15 |
| Weighted percentage (rounded of) of Course Contribution to Pos | 3 | 3 | 3 | 3 | 3 |

| Title of the Course | | FOOD PRESERVATION AND BAKERY | | | | | | | | |
|---|--|------------------------------|---|---|---|---------|----------|-------|----------|-----------|
| Course Code: | | 23BHFA4 | | | | | | | | |
| Category | I Year | L | T | P | O | Credits | Inst Hrs | Marks | | |
| | Semester - IV | | | | | | | CIA | External | Total |
| Allied – VII | | Y | | Y | | 3 | 3 | 25 | 75 | 100 |
| Learning Objectives | | | | | | | | | | |
| To enable the students to: | | | | | | | | | | |
| 1. To make students understand about the mechanism of spoilage and deterioration in foods, the basic food preservation principles, and methods to preserve foods. | | | | | | | | | | |
| 2. To develop professional and practical knowledge in bakery and confectionary and make them competent as an entrepreneur | | | | | | | | | | |
| UNIT | CONTENT | | | | | | | | | HOURS |
| UNIT I | Food preservation – Definition, General Principles and Methods of Food Preservation. Preservation by addition of sugar – General principles and preparation method of jams, jellies, squashes and syrups. Preservation by addition of salt - Pickling. Preparation of Indian Pickles. | | | | | | | | | 15 |
| UNIT II | Preservation by Use of High Temperature – Pasteurization, Sterilization and their types. Canning – steps, types of cans, advantages, disadvantages. Bottling – steps, advantages, disadvantages. Food dehydration – concept of dehydration and sun drying. Types of driers – advantages, disadvantages. Radiation of Foods - Mode of action of irradiation, Microwave heating, properties of microwaves, applications in food processing and preservation. | | | | | | | | | 15 |
| UNIT III | Preservation by use of Low Temperature, Types – Common types of cold storage, refrigeration – requirement of refrigerated storage, characteristic of refrigerant, refrigeration during transport, defects in cold storage. Freezing – Principles and methods of freezing, Advantages and disadvantages of freezing. Preservation with chemicals - Inorganic & Organic preservatives, Antibiotics and Mold inhibitors. | | | | | | | | | 15 |
| UNIT IV | Introduction to bakery - aims and objectives. Wheat flour and its role in bakery products. Wheat – type, varieties, composition, principles of flour milling, and their classification. Millet based Flour – types of flour incorporated items - biscuits, cake, pastry, snacks. | | | | | | | | | 15 |
| UNIT V | Other ingredients and their function in baking. Yeast – types, function, uses, effects of over and under fermentation. Eggs - composition, function in bakery and confectionery. Sugar – types, different forms and its uses. Fats – Composition, classification, function, effect of cooking. Milk products, emulsifiers, dried fruits, enzymes, cream, other leavening agents. Baking process – basic concepts, batch / continuous, dough mixing, dividing, moulding, panning, proofing and baking. | | | | | | | | | 15 |
| | TOTAL | | | | | | | | | 75 |

REFERENCES:

1. Kent K. L. (1975). **Technology of Cereals – with special reference to Wheat**, New York: Pergamon Press.
2. Sultan W. J. (1976). **Practical Baking Manual – for students and instructors**, West Port: AVI Publishing.
3. Matz S. A. (1989). **Technology for Materials of Baking**, England: Elsevier Science Publishers.
4. Borvers, J. (1992). Food Theory and Application (2ndEd), New York: Maxwell MacMillan International Edition.
5. Manay, N. S. and Sharaswamy, S. M. (1997). Foods: Facts and Principles New Delhi: New Age International Publishers.
6. McWilliams, M (2007). Foods: Experimental Perspectives 5th Ed, New Jersey: Macmillar Publishing Co.
7. Potter, N. N. and Hutchkiss, J. H. (1997). Food Science, 5th Ed, New Delhi: CBS Publishers and Distributors.
8. Rick Parker (2003) Introduction to Food Science, New York: Delmar Thomson Learning.
9. Scottsmith and Hui Y.H (Editors) (2004) Food Processing – Principles and Applications London Blackwell Publishing.
10. Subbulakshmi, G and Udipi, S. A. (2001). Foods Processing and Preservation, New Delhi: New Age International (P) Ltd. Publishing.
11. Swaminathan, M. (1995). Food Science Chemistry and Experimental Food. The Bangalore Printing and Publishing Co. Ltd.
12. Vacklavick, V. and Christian, E. (2003). Essentials of Food Science. New York: Kluwer Academic/ Plenum Publisher.

Mapping with Programme Outcomes

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | M | S | M | M | M | L | M | M | S |
| CO2 | S | S | S | M | M | M | M | M | M | S |
| CO3 | S | S | M | S | M | M | M | M | M | S |
| CO4 | S | S | S | M | M | M | M | M | M | S |
| CO5 | S | S | M | M | M | M | S | M | M | S |

Mapping with Programme Specific Outcomes

| CO/PSO | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
|---|------|------|------|------|------|
| CO1 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 |
| CO5 | 3 | 3 | 3 | 3 | 3 |
| Weightage | 15 | 15 | 15 | 15 | 15 |
| Weighted percentage (rounded off) of Course Contribution to Pos | 3 | 3 | 3 | 3 | 3 |

| Title of the Course | | FOOD PRESERVATION AND BAKERY LAB | | | | | | | | |
|---|--|----------------------------------|---|---|---|---------|----------|-------|----------|-----------|
| Course Code: | | 23BHFAP4 | | | | | | | | |
| Category | I Year | L | T | P | O | Credits | Inst Hrs | Marks | | |
| | Semester - IV | | | | | | | CIA | External | Total |
| Allied – VIII | | Y | | Y | | 3 | 3 | 25 | 75 | 100 |
| Learning Objectives | | | | | | | | | | |
| To enable the students to: | | | | | | | | | | |
| 3. To make students understand about the mechanism of spoilage and deterioration in foods, the basic food preservation principles, and methods to preserve foods. | | | | | | | | | | |
| 4. To develop professional and practical knowledge in bakery and confectionary and make them competent as an entrepreneur | | | | | | | | | | |
| UNIT | CONTENT | | | | | | | | | HOURS |
| UNIT I | A. Food Preservation 1. Preparation of product by using salt as preservative. 2. Preparation of product by using sugar as preservative. 3. Preparation of product by using oil as preservative | | | | | | | | | 15 |
| UNIT II | 1. Preparation of Product by using chemicals preservative 2. Preparation of food product by Freeze drying and 3. Sensory analysis of preserved and processed foods. | | | | | | | | | 15 |
| UNIT III | B. Bakery 1. Preparation of sweet and salt biscuits 2. Preparation of wheat bread and milk bread 3. Preparation of sweet buns | | | | | | | | | 15 |
| UNIT IV | 1. Preparation of varieties of cookies 2. Preparation of varieties cakes 3. Preparation of pizza | | | | | | | | | 15 |
| UNIT V | Visit a production unit of a bakery / Food Preservation Industry and prepare a report. | | | | | | | | | 15 |
| | TOTAL | | | | | | | | | 75 |

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Mapping with Programme Outcomes

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| CO1 | S | M | S | M | M | M | L | M | M | S |
| CO2 | S | S | S | M | M | M | M | M | M | S |
| CO3 | S | S | M | S | M | M | M | M | M | S |
| CO4 | S | S | S | M | M | M | M | M | M | S |
| CO5 | S | S | M | M | M | M | S | M | M | S |

Mapping with Programme Specific Outcomes

| CO/PSO | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
|---|-------------|-------------|-------------|-------------|-------------|
| CO1 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 3 | 3 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 |
| CO5 | 3 | 3 | 3 | 3 | 3 |
| Weightage | 15 | 15 | 15 | 15 | 15 |
| Weighted percentage (rounded of) of Course Contribution to Pos | 3 | 3 | 3 | 3 | 3 |