



# **BENGALURU CITY UNIVERSITY**

**CHOICE BASED CREDIT SYSTEM**

**(Semester Scheme with Multiple Entry and Exit Options for  
Under Graduate Course- as per NEP 2020)**

**Syllabus for Home Science  
(III & IV Semester)**

**2022-23 onwards**

**Proceedings of the BOS in Home Science (UG& PG) for Bengaluru City University held on  
16<sup>th</sup> September, 2022**

A meeting of the BOS in Home Science (UG& PG) for Bengaluru City University held on 16<sup>th</sup> September, 2022 between 10:30 am to 5:30 pm in Smt. V.H.D Central Institute of Home Science, Seshadri Road, Bengaluru – 560 001.

The following members were present for the meeting:

**Name and Designation**

**1. Dr Usha Devi. C**

Chairperson BOS in Home Science (UG, PG & PhD)  
Bengaluru City University (BCU)  
HOD, Dept. of Food and Nutrition & Research Centre,  
Smt. V.H.D Central Institute of Home Science,  
Seshadri Road, Bengaluru – 560 001.

*Usha Devi*  
16/9/22

**2. Dr. Vijayalaxmi A.H.M.,**

Member  
Principal & Associate Professor,  
Department of Human Development and Research Centre,  
Smt. V.H.D Central Institute of Home Science,  
Seshadri Road, Bengaluru – 560 001

*ABSENT*

**3. Dr. Madhumathy S.,**

Member  
Associate Professor & HOD,  
Department of Early Childhood Care and Administration,  
Smt. V.H.D Central Institute of Home Science,  
Seshadri Road, Bengaluru – 560 001

*S. Madhumathy*

**4. Dr. Asha Jyothi U. H.,**

Member  
Associate Professor & HOD,  
Department of Resource Management,  
Smt. V.H.D Central Institute of Home Science,  
Seshadri Road, Bengaluru – 560 001

*Asha Jyothi*

**5. Dr. Grace Premela Victor.,**

Member  
Associate Professor & HOD,  
Bishop Cotton Women's Christian College,  
Field Marshal Kariyappa Road,  
Bengaluru – 560 025

*Grace Premela*  
16/9/22

## Name and Designation

6. **Dr. Marie Kavitha Jayakaran.,**  
Member  
Associate Professor,  
Bishop Cotton Women's Christian College,  
Field Marshal Kariyappa Road,  
Bengaluru – 560 025

Mkavitha  
16/9/22

7. **Dr. Shanta Maria B. V.,**  
Member  
Associate Professor,  
Home Science,  
Mount Carmel College (Autonomous),  
No. 58, Palace Road,  
Bengaluru – 560 052

Shanta Maria  
16/9/22

8. **Dr. Sangeeta Pandey.,**  
Member  
Associate Professor & HOD,  
Food and Nutrition,  
Mount Carmel College (Autonomous),  
No. 58, Palace Road,  
Bengaluru – 560 052

Sangeeta  
16/9/22

9. **Dr. Komala M**  
Member  
Professor,  
Department of Human Development,  
University of Mysore,  
ManasaGangothri, Mysuru – 570 006

Komala  
16/9/22

The meeting began with Dr Usha Devi C., Chairperson BOS in Home Science, welcoming the members to the meeting and apprising the members of the agenda scheduled for the meeting. She also informed the members that at present two colleges listed below are offering BA/BSc Home Science as one optional and BSc ND courses at UG level and PG in Nutrition and Dietetics in one of the college.


- Bishop Cotton Women's Christian College – BA/BSc Home Science as one optional and ND course; and PG in Nutrition and Dietetics
- S B A N M College, Yelahanka - BSc CND

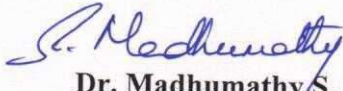
1. The Board reviewed the NEP Home Science UG syllabus of third and fourth semester, made the necessary minor changes in the syllabus and approved the same for the academic year 2022-2023 for all the courses

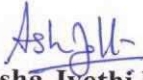


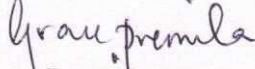
2. The board also reviewed M.Sc., Nutrition and Dietetics syllabus and made the necessary changes in the matrix and the blown up syllabus of III and IV semester and approved the same for academic year 2022-2023
3. The Board also constitutes the BOE (UG/PG) for approval by the BCU (Annexure-II).
4. The Board included panel of examiners from MCU, School of Home Science, Bishop Cotton Women's Christian College, Mount Carmel College to the Panel of Examiners sent by Bengaluru City University and recommended the same to BCU (Annexure-I) and an additional list of panel from other colleges.

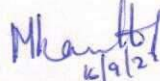
The meeting ended with the Chairperson thanking the members for attending the meeting.

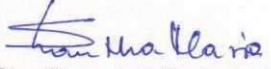
  
Dr. Vijayalaxmi A.H.M.

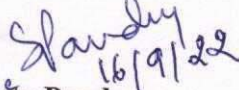
  
Dr. Madhumathy S.

  
Dr. Asha Jyothi U. H.

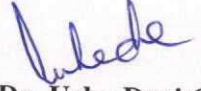
  
Dr. Grace Premela Victor.

  
Dr. Mary Kavitha Jayakiran.

  
Dr. Shanta Maria B. V.

  
Dr. Sangeta Pandey.

  
Prof. Komala M.

  
Dr. Usha Devi C,  
Chairperson  
Dr. USHA DEVI C., M.Sc., Ph.D., FISCA  
Chairperson  
BOS in Home Science (UG&PG)  
Bangalore City University (BCU)  
Central College Campus, Bangalore - 01



**THE LIST OF THE MEMBERS OF THE BOARD OF  
STUDIES – FACULTY OF HOMESCIENCE**

**DR. USHA DEVI. C**  
**DR.VIJAYLAXMI A.H.M**  
**DR. MADHUMATHY. S**  
**DR. SHANTHA MARIA B.V**  
**DR.GRACE PRAMILA VICTOR**  
**DR.ASHA JYOTHI U.H**  
**DR.SANGEETHA PANDEY**  
**DR. KOMALA . M**  
**DR. MARIE KAVITHA JAYAKARAN**

## **Contents**

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**CURRICULAM  
OF  
BA/BSc HOMESCIENCE**

**3<sup>rd</sup> and 4<sup>th</sup> semester**

**MODEL**

**BENGALURU CITY UNIVERSITY**



**Sub-committee members of B. A/B.Sc. Home  
Science**

1	Dr. Marie Kavitha
2	Dr. Vijaya U Patil
3	Dr. Manjula G. Kadapatti
4	Mrs. Veena Tirlapur
5	Mrs. Anita Bettaiah
6	Mrs. Shobha .S



Government of Karnataka

Curriculum

Program Name	B.A/B.Sc. Honours	Total Credits for the Program	265 Credits
Discipline Core	Home Science	Starting year of implementation	2021-22

**Program Outcomes:** At the end of the program the student should be able to:

(Refer to literature on outcome-based education (OBE) for details on Program Outcomes)

- PO1. Deliver quality tertiary education through learning while doing.
- PO2. Reflect universal and domain-specific values in Home Science.
- PO3. Involve, communicate, and engage keystakeholders.
- PO4. Preach and practice change as a continuum.
- PO5. Develop the ability to address the complexities and interface among of self, societal and national priorities.
- PO6. Generate multi-skilled leaders with a holistic perspective that cuts across disciplines.
- PO7. Instill both generic and subject-specific skills to succeed in the employment market.
- PO8. Foster a genre of responsible students with a passion for lifelong learning and entrepreneurship.
- PO9. Develop sensitivity, resourcefulness, and competence to render service to families, communities, and the nation at large.
- PO10. Promote research, innovation, and design (product) development favouring all the disciplines in Home Science.
- PO11. Enhance digital literacy and apply them to engage in real time problem solving and ideation related to all fields of Home Science.
- PO12. Appreciate and benefit from the symbiotic relationship among the five core disciplines of Home Science – Resource Management, Food Science and Nutrition, Textiles and Clothing, Human Development and Family Studies and Extension and Communication
- PO13. Textiles and Clothing, Human Development and Family Studies and Extension and Communication

**Assessment:**

Weightage for assessments (in percentage)

Type of Course	Formative Assessment / IA	Summative Assessment
Theory	40	60
Practical	25	25
Projects	-	-
Experiential Learning (Internships etc.)	-	-

**Contents of Courses for BA/B.Sc. Home Science as Major Subject****Model II A**

Semester	Course Name	Course Category	Theory / Practical	Credits	Paper Title	Marks	
						S. A	IA
3.	HSCT3.1	DSC- A3	Theory	4	Early Childhood Care and Education	60	40
	HSCP3.1		Practical	2	Early Childhood Care and Education	25	25
	HSCT3.2	OE-3	Theory	3	Fundamentals of Interior Decoration	60	40
4.	HSCT4.1	DSC- A4	Theory	4	Introduction to Textiles	60	40
	HSCP4.1		Practical	2	Introduction to Textiles	25	25
	HSCT4.2	OE-4	Theory	3	FashionDesigning	60	40
<b>Exit Option with Diploma in Home Science (100 Credits)</b>							

**Note: In Semester 3 open elective has been changed from Income Generating skills to Fundamentals of Interior Decoration**





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**Curriculum**

Program Name	BA/BSc Home Science		Semester	Third Sem
Course Title	Early Childhood Care and Education (Theory)			
Course No.	HSCT3.1	DSC A-3	No. of Credits	4+2
Contact hours	52Hrs		Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40		Summative Assessment Marks	60

<b>Course Pre-requisite(s): Certificate with minimum 45%.</b>	
<p><b>Course Outcomes (COs):</b> At the end of the course the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Explain the importance of early childhood years and significance of intervention programs for early childhood development.</li> <li>2. Describe the historical developments – global and Indian including the current programs and policies in ECCE</li> <li>3. Identify various indigenous (Indian) models of Early Childhood Education and apply it to understand the current early childhood research, theoretical trends, and issues.</li> <li>4. Analyze curriculum models and pedagogical approaches in early childhood education.</li> <li>5. Create developmentally appropriate programs for young children.</li> </ol>	
<b>Content</b>	<b>52Hrs</b>
<b>Unit-I Early Childhood Care and Education</b>	<b>13 Hrs</b>
<b>Chapter 1</b> Meaning, Importance and Need for ECCE, Objectives of ECCE.	2 Hrs
<b>Chapter 2-</b> Types of ECCE Programs – Day care, Montessori, Kindergarten, Balwadi, Anganwadi. Mobile Crèche and Play Group	4 Hrs
<b>Chapter 3-</b> Historical overview of Early Childhood Care and Education – Contributions of Western and Indian Educators- Gandhiji, Jijubai Modak, Montessori, Froebel, and John Dewey	5 Hrs
<b>Chapter 4-</b> Policies and Contributions of Agencies to ECCE in India	2 Hrs
<b>Unit -II - Organizational Setup and Material Management</b>	<b>13 Hrs</b>
<b>Chapter5:</b> Organizational Setup and Material Management–Place/Building/Space–indoor and outdoor, amenities and facilities for indoor and outdoor, garden, playground, storage	5 Hrs

<b>Chapter 6:</b> Equipment and Materials required for Play and Learning – Selection and Care of equipment; Equipment needed for Urban and Rural preschools.	4 Hrs
<b>Chapter 7:</b> Curriculum models and Programme Planning – Meaning of curriculum, curriculum models, Programme planning – Principles, Types and Factors influencing Programme planning, Programme evaluation	4 Hrs
<b>Unit -III</b>	<b>13 Hrs</b>
<b>Chapter8:</b> ActivitiesforYoungchildreninECCE–Age/Developmentallyappropriateactivities, Art and creative activities, Music and Rhythmic Activities, Mathematic, Language and Communication activities; Nature and ScienceActivities.	5 Hrs
<b>Chapter 9:</b> 3 Rs – Reading readiness, writing readiness and readiness for arithmetic; Literature for Children; Indoor and outdoor Play activities – Role of teacher in planning and implementing the activities.	4 Hrs
<b>Chapter 10:</b> Parent Education and Involvement – Needs and Importance, Methods, Planning, Implementing and Evaluation of parent education program.	4 Hrs
<b>Unit -IV</b>	<b>13 Hrs</b>
<b>Chapter 11:</b> Personnel Management – Personnel required in ECCE centre – Selection and recruitment, qualities, roles, duties and responsibilities; Supervision and monitoring, Evaluation of personnel – Cooperation and Coordination of personnel	8Hrs
<b>Chapter 12:</b> Documentation and Financial Management – Importance and Principles of Record keeping, Types of records; Financial allocations and budgetary considerations, budget making and Resource generation avenues	5 Hrs

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)											
	1	2	3	4	5	6	7	8	9	10	11	12
1 Explain the importance of early childhood years and significance of intervention programs for early childhood development.		X		X	X						X	
2. Describe the historical developments –global and Indian including the current programs and policies in ECCE								X	X		X	
4. Analyze curriculum models and pedagogical approaches in early childhood education.			X	X				X				
5 Create developmentally appropriate programs for young children.			X	X					X			

**Pedagogy-Theory**

Formative Assessment :40 MARKS	
Assessment Occasion/ type	Weightage in Marks
Test 1	15
Test 2	15
Assignment / Project	5+5
<b>Total</b>	THEORY 60 MARKS + 40 Marks =100

Course Title	<b>Early Childhood Care and Education (Practical)</b>	Practical Credits	<b>2</b>
Course No.	<b>HSCP3.1</b>	Contact Hours	<b>52/13 sessions</b>
<b>List of Experiments to be conducted</b>			
<b>Unit-I:</b> Visit to Nursery School, Day Care/ Crèches, Anganwadi/ Balwadi – Observe the early childhood education programme and write a report			<b>4 Hrs</b>
<b>Unit-II:</b> Plan and prepare teaching aids for physical development, storytelling, creative activities, nature, and science activities			<b>15 Hrs</b>
<b>Unit-III:</b> a) Develop low cost and indigenous play materials for cognitive development b) Prepare a Scrap Book/picture book/ resource book for toddlers			<b>6 Hrs</b>



<p style="text-align: center;"><b>Unit-IV:</b></p> <p>a) Plan any one theme based and one non-theme-based programs used in the ECE.</p> <p>b) Design a parent handbook/ brochure to provide information about an early childhood education centre or any topic related to early childhood education.</p>	<b>5 Hrs</b>
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**Pedagogy-Practical:**

<b>Formative Assessment :25 MARKS</b>	
<b>Assessment Occasion/ type</b>	<b>Weightage in Marks</b>
Test 1	15
Test 2	15
Assignment / Project	5+5
<b>Total</b>	Exam 25 Marks + IA 25 Marks =50

References	
1	Agarwal, J. C. (2007). Early childhood care and education: principles and practices. New Delhi:Shipra
2	Agarwal,S.P.andUsmani,M.(2000).Children'seducationinIndia:fromVedictimestotwentyfirst centuryNew Delhi:Shipra.
3	OECD. (2004). Curricula and pedagogies in early childhood education and care. Retrieved from <a href="http://www.oecd.org/education/school/31672150.pdf">http://www.oecd.org/education/school/31672150.pdf</a>
4	Burtonwood, N. (2002). Anthropology, Sociology and the Preparation of Teachers for a culturallyPlural Society. Pedagogy, Culture and Society. 10(3), 367-387.
5	Clarke, P. (2001). Teaching &learning: the culture of pedagogy. New York: Sage
6	Kress, J.S., Norris, J. A., Schoenholz, D. A., Elias, M.J., and Seigle, P. (Nov., 2004). Bringing TogetherEducationalStandardsandSocialandEmotionalLearning:MakingtheCaseforEducators. American Journal of Education, 111 (1), pp66-89
7	Moyles, J. & Hargreaves, L. (1998). The primary curriculum. Learning from international perspectives. London: Routledge
8	National association for the education of young children, July 1998. Learning to read and Write: developmentally appropriate practices for young children. 53 (4), 30-46.
9.	NCERT (2007). Handbook of arts in education
10.	Neuman, S., Dwyer, J. &Koh, S. (2007). Child/Home Enguage and literacy observation. Baltimore:Brooke Publishing House.

Date

Signature of Committee Chairperson



Government of Karnataka

**Curriculum**

Program Name	<b>BSc Home Science</b>		Semester	<b>Third Sem</b>
Course Title	<b>Fundamentals of Interior Decoration (Theory)</b>			
Course No.	<b>HSCT3.2</b>	<b>OE-3</b>	No. of Credits	<b>3</b>
Contact hours	<b>45 Hrs</b>		Duration of SEA/Exam	<b>2Hours</b>
Formative Assessment Marks	<b>40</b>		Summative Assessment Marks	<b>60</b>

<b>Course Pre-requisite(s): Standard 12 and its equivalence with minimum 35%</b>	
<b>Course Outcomes (COs):</b> At the end of the course the student should be able to: <ol style="list-style-type: none"> <li>1. Appreciate growth and development of interior design and decoration in India</li> <li>2. Enabling students distinguish between Interior decoration and Interior design</li> <li>3. Analyze place of elements and principles in interior designing</li> <li>4. Use of Accessories in interiors</li> </ol>	
<b>Content</b>	<b>45 Hrs</b>
<b>Unit-I Interior Design vs. Interior Decoration</b>	
1.1 Interior Design and Interior Decoration: concept and basic differences 1.2 Aims of Interior Design: Beauty, Expressiveness and Functionalism 1.3 Interior decoration in India: History	5 Hrs
<b>Unit -II - Fundamentals in Designing</b>	
21 Design: Definition and classification, Structural and Decorative design – importance and requirements of good structural design. Classification of decorative design- naturalistic, conventional, geometric, and abstract. 22 Elements of Art- Line- meaning and definition, types; Shape and form; Texture – meaning and classification- tactile and visual textures; Light-types	15 Hrs
2.3 Colour –The Prang Colour System, Dimensions of Colour, Colour schemes (related, contrasting), consideration for the choice of colour in different rooms.	15 Hrs



2.4 Principles of design-Balance: meaning and definition, classification-Rhythm: meaning and definition, types - Emphasis- meaning and definition, types, and methods of achieving - Proportion: meaning and definition, - Harmony: meaning and definition, methods of achieving.	
<b>Unit -III Accessories in Interiors</b>	
3.1 Accessories: Definition and importance Classification – functional, decorative and both 3.2 Selection and placement of accessories 3.3 Types of accessories	10 Hrs

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)											
	1	2	3	4	5	6	7	8	9	10	11	12
Know the elements of Art			X		X							
Understand the use of Light in interiors.				X	X							
Acquire skills to formulate colour schemes in interiors.							X	X				
Explore the principles of design							X		X			
Skills in arranging and placement of accessories.					X		X					

**Pedagogy**

Formative Assessment :40 MARKS	
Assessment Occasion/ type	Weightage in Marks
Test 1	15
Test 2	15
Assignment / Project	5+5
<b>Total</b>	60 Marks + 40 Marks =100

References	
1	Gandotra, V., Shukul, M., and Jaiswal, N .(2010-11). Introduction to Interior Design & Decoration. New Delhi: Dominant Publishers and Distributors. (ISBN No.81-7888-295-7)
2	Goldstein., and Goldstein, V. (1967).Art in Everyday Life. New Delhi: Oxford and IBH PublishingCo.
3	Kasu, A.A (2005).Interior Design. Delhi: Ashish Book Centre
4	Mullick P,(2016) Text book of Home Science
5	Seetharaman, P., and Pannu, P.(2010). Interior Design and Decoration.NewDelhi : CBS Publishers& Distributors Pvt. Ltd(ISBN No. 81-239-1192-0).
6	Bhatt,P. (2011). Foundation of Art and Design. Mumbai: The Lakhani Book Depot.
7	Gandotra, V. ,Shukul, M., and Jaiswal, N .(201011). Introduction to Interior Design & Decoration

Date:

Subject Committee Chairperson



Government of Karnataka

**Curriculum**

Program Name	BSc Home Science		Semester	Fourth Sem
Course Title	Introduction to Textiles <b>(Theory)</b>			
Course No.	HSCT4.1	DSC A4	No. of Credits	4+2
Contact hours	52 Hrs		Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40		Summative Assessment Marks	60

<b>Course Pre-requisite(s): Certificate with minimum 45%.</b>	
<p><b>Course Outcomes (COs):</b> At the end of the course the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Understand the structure and production techniques of various natural and manmade fibers and their physical properties.</li> <li>2. Understand the various conventional and non-conventional techniques of yarn spinning.</li> <li>3. Demonstrate an understanding of various types of fabric forming methods.</li> <li>4. Gain understanding of quality parameters for fiber, yarn and fabrics.</li> <li>5. To introduce the basic scientific concepts related to processing and production of textiles.</li> </ol>	
<b>Content</b>	<b>52Hrs</b>
<b>Unit-I Textile, Yarn and Fabric Construction</b>	<b>16 Hrs</b>
<b>Chapter 1</b> Meaning, Importance and Scope of Textiles, Classification of Natural and Manmade fiber.	2 Hrs
<b>Chapter 2</b> -Properties of Cotton, Silk, Wool, Nylon, Polyester, Classification of Yarns, Yarn Twists and Counts. Manufacturing process of cotton, silk and nylon.	8 Hrs
<b>Chapter 3</b> - Parts of a Basic Loom – Shuttle, Heddle, Reed, Warp beam & Cloth Beam Basic; Weaving operation – Shedding, Picking, Beating, taking in and Letting off	2 Hrs
<b>Chapter 4</b> -Basic Weaves–Plain Weave, Basket Weave, Rib, Twill, Satin, Fancy weaves–Leno, Pile and Jacquard.	4 Hrs
<b>Unit -II – Finishing</b>	<b>12 Hrs</b>
<b>Chapter 5:</b> Objectives, Classification Finishes - Aesthetic Finishes (Singeing, Bleaching, Mercerization, Tenting, Shrinking, Weighting, Calendaring, Sizing, Embossing and Napping).	7 Hrs

<b>Chapter 6:</b> Finishes for enhancing special character-Functional Finishes (Fireproof, Waterproof, proof, and Mildew proof	5 Hrs
<b>Unit -III Care of Clothing</b>	<b>6 Hrs</b>
<b>Chapter 7:</b> Laundering of Cotton, Silk and Wool and Storage	4 Hrs
<b>Chapter 8:</b> Dry Cleaning – Meaning, Methods and Advantages & Disadvantages.	2 Hrs
<b>Unit -IV Processing of Fabric</b>	<b>18 Hrs</b>
<b>(a) DYEING</b>	5 Hrs
<b>Chapter 9:</b> Introduction, Principles of dyeing, Methods of dyeing (fiber, yarn, fabric and garment)	
<b>Chapter 10:</b> Synthetic Dyes: (Direct, Azoic, Basic, Vat, Solubilized vat dyes, Sulphur, Acid, Mordant, Reactive and Disperse)	5 Hrs
<b>Chapter 11:</b> Natural Dyes: (Classification, their application and ecological concern)	4 Hrs
<b>(b) PRINTING</b>	4 Hrs
<b>Chapter 12:</b> Introduction to printing and Various methods of Printing-block, roller and screen.	

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)											
	1	2	3	4	5	6	7	8	9	10	11	12
Understand the structure and production techniques of various natural and manmade fibers and their physical properties.			X	X			X					
Understand the various conventional and non-conventional techniques of yarnspinning.				X				X				
Demonstrate an understanding of various types of fabric forming methods.	X			X				X				
Gain understanding of quality parameters for fiber, yarn, and fabrics.			X	X			X					
To introduce the basic scientific concepts related to processing and production of textiles.			X				X	X				

## Pedagogy-Theory

Formative Assessment :40 MARKS	
Assessment Occasion/ type	Weightage in Marks
Test 1	15
Test 2	15
Assignment / Project	5+5
<b>Total</b>	THEORY 60 MARKS + 40 Marks =100

Course Title	Introduction to textiles ( <b>Practical</b> )		Practical Credits	2
Course No.	HSCP4.1	Contact hours	52 hrs / 13 Sessions	
List of Experiments to be conducted				
<div>1. Fiber IdentificationTest-</div> <div>A) Visualtest.</div> <div>B) Solubilitytest.</div> <div>C) Burning testand</div> <div>D) Microscopicstest</div> <div>(Cotton, Silk, Wool, Rayon, Polyester &amp; Nylon fibers)</div> <div>2. Yarn Identification- Single, Ply, Cord, elastic, Monofilament, Multifilament and SpunYarn</div> <div>3. Identification of fiber, yarn, weave, print &amp;dyeing-samples</div> <div>4. Weaving- Making samples of thefollowing:</div> <div>A) Plain- BasketRibbed.</div> <div>B) Twill</div> <div>C) Sateen Warp and WeftFace</div> <div>5. Dyeing &amp; Printing –Block/stencil/tie &amp;dye/batik</div> <div>6. Visit to spinning/weaving/dyeing/printingunit</div>				



### **Pedagogy-Practical:**

<b>Formative Assessment: 25 MARKS</b>	
<b>Assessment Occasion/ type</b>	<b>Weightage in Marks</b>
Test 1	10
Test 2	10
Assignment / Project	5/5
<b>Total</b>	Exam 25 Marks + IA 25 Marks =50

<b>References</b>	
1	Hollen and Saddler J (1995): Textiles latest Ed., Mac Millan and Co., New York.
2	Mullick P.,(2012), “Text Book of Home Science ”Kalyani Publishers. New Delhi.
3	Potter and Cob man “Fiber to Fabric”.
4	Dorothy Burhan “A Textile Terminology”
5	Hert K.P.” Textiles fibers and their use”, IBH Publishing co.
6	Durga.Deulkar “Household Textiles and Laundry” Bangaram L Sons Delhi.
7	Corbman. B. P (2001): Textile Fiber to Fabric, McGraw Hill, New York
8	Peter. R. Lord, (2003). Handbook of Yarn Production, Wood head Publishing Ltd, England.
9	Kothari, V. K, (2010). Progress in Textile Science, Vol I, II and III, IAFL Publications, New Delhi.
10	Seema Sekhri, (2011). Textbook of Fabric Science, Fundamentals to finishing, PHI Learning Private limited, New Delhi.

Date:

Subject Committee Chairperson



Government of Karnataka

**Curriculum**

Program Name	BSc Home Science		Semester	Fourth Sem
Course Title	FASHION DESIGNING (Theory)			
Course No.	HSCT4.2	OE-4	No. of Credits	3
Contact hours	45 Hrs		Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40		Summative Assessment Marks	60

**Course Pre-requisite(s): Standard 12 and its equivalence with minimum 35%**

**Course Outcomes (COs):** At the end of the course the student should be able to:

1. To obtain basic knowledge on Fashion and Fashionterminology
2. To acquire conceptual knowledge of elements and principles ofdesign.
3. To enable students to gain knowledge of design, textile design andfashion.
4. To understand the fashion design concept andprocess.
5. To obtain knowledge on fashiondesigners

Content		45 Hrs
Unit-I- Introduction to Fashion		
1.1	Fashion – Definition, Classification,terminologies,	5 Hrs
1.2	Fashion cycle, Factor influencing the fashiontrends,	
1.3	Fashion psychology andforecasting	
Unit -II- Elements and Principles of Design		
2.1	Introduction to textile, Textileterminology	25 Hrs
2.2	Textile fibres and their classification, physical and chemical properties offibres.	
2.3	Elements of Design and colour– Definition, Types, Elements, Principles and its application in dressdesign.	
2.4	Selection of suitable clothing and design, factors affecting selection of clothing,Clothing of different agegroups.	

<b>Unit -III- Fashion Design</b>	
3.1 Fashion illustration: - Definition, terminology, importance and theories, tools for fashion drawing, sketching principles, Basic human proportion of male and female.	15 Hrs
3.2 Illustration for apparels using the themes- Casual, formal, ethnic, office wear, winter, summer, and spring	
3.3 Fashion Designer – meaning, classification, Designers of National repute	

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)											
	1	2	3	4	5	6	7	8	9	10	11	12
Know the Fashion terminology			X		X							
Understand the fashion cycle and factors influencing the fashion trends.				X	X							
Acquire skills in recognizing different fibres.							X	X				
Explore the principles and elements of Art and Design							X		X			
Skills in illustrating apparel using themes.					X		X					

**Pedagogy**

<b>Formative Assessment : 40 MARKS</b>	
Assessment Occasion/ type	Weightage in Marks
Test 1	15
Test 2	15
Assignment / Project	5+5
<b>Total</b>	60 Marks + 40 Marks =100

<b>References</b>	
1	Derrick, L. (2018) Fashion Sketchbook: Fashion Sketchbook with figure templates (Fashion Croquis), Create Space Independent Publishing Platform
2	Elaine, S. (2013) The Dynamics of Fashion. 4th Ed. New York: Bloomsbury publication.
3	Patrick, J. I. (2003) Introduction to Fashion Design, London: B.T. Batsford

References	
4	Sharon L. T. and Glazer, S.S. (2017), Illustrating Fashion, 4th Ed. New York: Fairchild Books. The Snap Fashion Sketch Book, Prentice Hall, New Jersey.
5	Stipelman, S. (2017) Illustrating Fashion, 4th Ed. New York: Fairchild Books.
6	Booth, J.E. (1996). Principles of Textile Testing. New Delhi: CBS Publishers & Distributors Pvt. Ltd.
7	Corbman, P.B. (1983). Textiles: Fibre to Fabric. McGraw-Hill Publishers.
8	Tyagi, A. (2016). Handbook of Fashion and Textile Design. New Delhi: Sonali publication
9	Wynne. A., (1997). Textiles, The Motivate Series Mcmillan Education Ltd. , London.

**DATE**

**SIGNATURE OF COMMITTEE CHAIRPERSON**

**CURRICULAM**  
**OF**  
**BSc -NUTRITION AND DIETETICS**  
**3<sup>RD</sup> AND 4<sup>TH</sup> SEMESTER**  
**BENGALURU CITY UNIVERSITY**

### **Sub-committee members of B.Sc. Nutrition and Dietetics**

1	Dr. Sangeeta Pandey
2	Dr. Geetha Santhosh
3	Dr. V. Padma
4	Dr Usha Devi C
5	Dr Asha G
6	Mrs Vidhya K



Government of Karnataka

**Curriculum**

Program Name	<b>B.Sc. Honours</b>	Total Credits for the Program	<b>226 Credits</b>
Discipline Core	<b>Nutrition and Dietetics</b>	Starting year of implementation	<b>2021-22</b>

**Program Outcomes:** At the end of the program the student should be able to:

- PO1. Disciplinary Knowledge: Understand the role and importance of food and nutrition for the welfare of the community and acquire the skills in planning diet, health and diseases
- PO2. Communication Skills: Learn and apply evidence-based guidelines in the field of dietetics, nutrition counselling, nutrition research laboratory, community
- PO3. Critical thinking: Understand the structure and functions of the different organs systems in relation to nutrition
- PO4. Interpersonal and Problem Solving: Design solutions and novel food products to meet the specified nutrient needs with appropriate consideration for the public health and safety.
- PO5. Critical thinking, Communication and problem solving: Comprehend, communicate effectively, plan, design and implement programs in the field of nutrition and dietetics
- PO6. Decision making, Analytical and Research skills: Understand and demonstrate the knowledge of food science, food science and quality control in societal and environmental contexts
- PO7. Moral and ethical awareness/reasoning and Research skills: Apply ethical principles and commit to professional ethics and responsibilities in the field of nutrition, sports, food industry and healthcare sectors.
- PO8. Interpersonal and Business skills: Understand the applications of nutraceuticals and functional foods in the product development from conceptualization to evaluation of the quality of the food product
- PO9. Analytical and Research skills: Comprehend the knowledge and role of food additives in food industry in relation to its analytical techniques
- PO10. Critical thinking, Analysis and Research skills: Understand and apply the concept of nutrients and nutritional science in the evaluation of health and disease
- PO11. Goal Setting and Problem-solving skills: Enable students to pursue higher education and research



**Assessment:**

Weightage for assessments (in percentage)

Type of Course	Formative Assessment / IA	Summative Assessment
Theory	40	60
Practical	25	25
Projects	30	70
Experiential Learning (Internships etc.)	30	70

**Contents of Courses for B.Sc. Degree/ Honours in Nutrition and Dietetics****Model II A**

Semester	Course Name	Course Category	Theory / Practical	Credits	Paper Title	Marks	
						S. A	I.A
III	NDT3.1	DSC- 3	Theory	4	Nutrition through life span	60	40
	NDP3.1		Practical	2	Nutrition through life span	25	25
	NDT3.2	OE-3	Theory	3	Nutritional Assessment/ Traditional Foods and Health	60	40
IV	NDT4.1	DSC- 4	Theory	4	Human Physiology	60	40
	NDP4.1		Practical	2	Human Physiology	25	25
	NDT4.2	OE-4	Theory	3	Nutrition in weight management/ Diet in lifestyle disorder	60	40
<b>Exit Option with Diploma in Nutrition and Dietetics (100 Credits)</b>							

**Note: The Discipline core paper of 4th semester has been changed to Human Physiology**



Government of Karnataka

**Curriculum**

Program Name	BSc Nutrition and Dietetics		Semester	Third Sem
Course Title	Nutrition through life span (Theory)			
Course No.	NDT3.1	DSC 3	No. of Credits	4+2
Contact hours	56 Hrs		Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40		Summative Assessment Marks	60

**Course Outcomes (COs):** At the end of the course the student should be able to:

1. Gains knowledge and learn to apply the latest in research-based nutrient needs of different lifestages.
2. Relate nutrient needs to developmental stages and plan diets which will adequately meet nutritional requirements.
3. Relate the role of changing metabolism, risk of chronic diseases and impact of functional foods in effectively planning diets for adults.
4. Gains competence on meeting nutrition needs and establishing dietary patterns to promote optimum health and reducing the impact of chronic diseases.

Content			56 Hrs
<b>Unit-I Nutrition during Pregnancy and Lactation</b>			
<b>Pregnancy:</b> Physiological stages of pregnancy b) Effect of Nutritional status on Pregnancy outcome c) Nutritional Requirements d) Guide for eating during pregnancy) Complications of pregnancy and their dietary Implications.  <b>Lactation:</b> Physiology b) Nutritional Requirements, breast feeding an infant			14 Hrs
Page 1	Nutrition during Infancy and Toddlers		

a) Physiological Development b) Nutritional Requirements c) Milk for Infants-Composition of human and cow's milk, formulas d) Complimentary foods-weaning pattern, composition, general principles in feeding infants, special feeding problems <b>High Risk Infant:</b> Assessment of nutritional status, Nutrition risk factors, Nutrient needs of high-risk infants, Feeding the high-risk infant. Growth and developmental outcome Nutritional requirements of Toddlers (1-3 years)	14 Hrs
<b>Unit -III Nutrition in Childhood and Adolescence</b>	
<b>Nutrition In Childhood Pre-School and School going:</b> a) Growth and Development, b) Nutritional Requirement's, c) Factors influencing food intake, d) Nutritional Concerns. <b>Adolescence:</b> a) Growth and Development-Physiologic changes, b) Nutritional Requirements, c) Situations with special needs.	14 Hrs
<b>Unit -IV Nutrition for the Adults and the Elderly</b>	
<b>Nutrition in adults:</b> a) nutrient needs modifications for different activity levels and different income groups. <b>Nutrient requirements during old Age:</b> a) Process of Aging, b) Nutrient Requirements, Nutrition Related problems of old Age, Nutrition and Bone health in brief, c) Degenerative diseases, d) Drug-Food and nutrient Reaction.	14 Hrs

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)											
	1	2	3	4	5	6	7	8	9	10	11	12
Gains knowledge and learn to apply the latest in research-based nutrient needs of different lifestages.		X										
Relate nutrient needs to developmental stages and plan diets which will adequately meet nutritional requirements.	X											
Relate the role of changing metabolism, risk of chronic diseases and impact of functional foods in effectively planning diets for adults				X								
Gains competence on meeting nutrition needs and establishing dietary patterns to promote optimum health and reducing the impact of chronic diseases.					X					X		

**Pedagogy-** Lecture, Group discussion, Demonstrations, Hands on training skills

Formative Assessment:	
Assessment Occasion/ type	Weightage in Marks
Test 1	10
Test 2	10
Assignment / Project	5+5
Project	10
<b>Total</b>	<b>40 Marks</b>

Course Title	<b>Nutrition through life span (Practical)</b>	Practical Credits	<b>2</b>
Course No.	<b>NDP3.1</b>	Contact hours	<b>4 Hrs/Week</b>
<b>List of Experiments to be conducted</b>			
<ol style="list-style-type: none"> <li>1. Planning a day's diet for Pregnant Woman Sedentary, moderate and heavyworker</li> <li>2. Preparing Complimentary Feeds for Infants-weaning foods ( 6, 8 month) OR Preparing Complimentary Feeds for Infants-weaning foods (10, 12 month).</li> <li>3. Planning and preparation of a day's diet for a pre school going child with special emphasis on Packed Lunches ( 4-6 yrs)</li> <li>4. Planning and preparation of a day's diet for a school going child with special emphasis on Packed Lunches (7-9yrs.).</li> <li>5. Planning and preparation of a day's diet for an adolescent girl (13-15yrs and 16-17yrs). OR Planning and preparation of a day's diet for an adolescent boy (13-15yrs and 16-17yrs)</li> <li>6. Planning and preparation of a day's diet for an adult man (sedentary/moderate/ heavyworker)</li> <li>7. Planning and preparation of a day's diet for an adult woman (sedentary/moderate/ heavyworker)</li> <li>8. Planning and preparing recipes for a senior citizen:Breakfast/Lunch. OR Planning and preparing recipes for a senior citizen:Snacks/Dinner</li> </ol>			

**Pedagogy-** Lecture, Group discussion, Demonstrations

<b>Formative Assessment</b>	
<b>Assessment Occasion/ type</b>	<b>Weightage in Marks</b>
Test 1	05
Test 2	05
Practical record	10
Participation & Involvement	05
<b>Total</b>	<b>25 Marks</b>

References	
1	Antia, F.P. (2005): Clinical Nutrition and Dietetics, Oxford University Press, Delhi
2	Gordon M Ward law (1999) Perspectives in Nutrition 4th ed.WCB/Mcgraw Hill. International edition.
3	Mahan,L.K.,Arlin,M.T.(2000):Krause'sFood,NutritionandDiettherapy,11th edition, W.B.Saunders Company,London.
4	Passmore, R and Davidson S (1986) Human Nutrition and Dietetics.Living stone Publishers.
5	Robinson,C.H;Lawler,M.R.Chenoweth,W.L;and Garwick,A.E(1986):Normal and Therapeutic Nutrition,17th Ed., Mac Millan PublishingCo
6	Shil's M E, Alfon J A, Shike M (1994) Modern Nutrition In health and Diseases 8th ed.
7	Shubhangini A Joshi (2002): Nutrition and Dietetics2nd edition, Tata Mc Graw-Hill Publishing Company Limited, New Delhi.
8	Srilakshmi,B.(2005):Dietetics,5th edition, New Age International(P) Limited Publishers, New Delhi
9	Vincent Hegarty© (1988, Decissions in Nutrition.Times Mirror/Mosby College Publishing, St.Louis.
10	Williams's (1989): Nutrition and diet Therapy.6th edition. Times Mirror/Mosby College Publishing, St.Louis.
11	Mary Kay Mitchell (2015) Nutrition Across the Life span. Scientific International Pvt ltd,New Delhi

Date:

Subject Committee Chairperson



Government of Karnataka

**Curriculum**

Program Name	BSc Nutrition and Dietetics		Semester	Third Sem
Course Title	Traditional Foods & Health (OPEN ELECTIVE) – (Theory)			
Course No.	NDT3.2	OE 3	No. of Credits	3
Contact hours	45 Hrs		Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40	Summative Assessment Marks		60

**Course Outcomes (COs):** At the end of the course the student should be able to:

1. Developing a sound knowledge on diversities of foods in India with focus on traditional foods.
2. Develop an understanding of historical and traditional perspective of foods and food habits

<b>Content</b>	<b>45 Hrs</b>
<b>Unit-I Introduction to Traditional foods</b>	
<p>Definition of Traditional foods, food as religious and cultural symbols; importance of food in understanding human culture - variability, diversity.</p> <p>Indian traditional foods and cuisine: History and evolution</p> <p>Specialty ingredients in regional cuisines – herbs, extract, spices, masala powders and cooking oils of different regions</p> <p>Geographical Indication (GI) tag for traditional foods</p> <p>Health Aspects of Traditional Foods:</p> <p>Comparison of traditional foods with typical fast foods/junk foods—cost, food safety, nutritional facts and benefits; traditional foods used for specific ailments / illnesses, emotional benefits.</p>	15 Hrs
<b>Unit -II - Traditional Food Patterns</b>	
<p>Typical breakfast, meal and snack foods of different regions of India. Regional foods that have gone Pan Indian / Global. Popular regional foods; Traditional fermented foods, pickles and preserves, beverages, snacks, desserts and sweets, street foods.</p> <p>Regional cuisines of India- Traditional foods of south Indian, north Indian, west Indian, and east Indian cuisine.</p> <p>Traditional processing methods: sun drying, osmotic drying, brining, pickling, and smoking</p> <p>Adding yoghurt, browning of onions, preparation of curry base, cooking spice paste, natural colorings, dry roasting, spices in oil, ground spices, tempering</p>	15 Hrs

<b>Unit -III Commercial production of Traditional foods</b>	
Processing and manufacture of traditional foods- paneer, butter and ghee manufacture Commercial production of traditional breads, snacks, ready-to-eat foods and instant mixes, frozen foods Commercial production and packaging of traditional beverages such as tender coconut water, neera, lassi, buttermilk, dahi. Commercial production of intermediate foods – ginger and garlic pastes, tamarind pastes, masalas (spice mixes), idli and dosa batters.	15 Hrs

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)											
	1	2	3	4	5	6	7	8	9	10	11	12
Developing a sound knowledge on diversities of foods in India with focus on traditional foods	X											
Develop an understanding of historical and traditional perspective of foods and food habits	X											

**Pedagogy-** Lecture, Group discussion, Demonstrations

<b>Formative Assessment:</b>	
Assessment Occasion/ type	Weightage in Marks
Test 1	10
Test 2	10
Assignment / Seminar	5+5
Project	10
<b>Total</b>	<b>40 Marks</b>

<b>References</b>	
1	Sen, Colleen Taylor Food Culture in India Greenwood Press, 2005.
2	Davidar, Ruth N. Indian Food Science: A Health and Nutrition Guide to Traditional Recipes: East West Books, 2001
3	Wyane Gisslen. Professional Cooking. John Wiley & Sons, New Jersey. 2015. 8th edn
4	Jagmohan Negi. Fundamentals of Culinary Art. S. Chand and Company Pvt. Ltd., New Delhi. 2013.



5	JagmohanNegi.FoodPresentationTechniques(GarnishingandDecoration).S.ChandandCompany Pvt. Ltd., New Delhi. 2013.4.
6	Eva Medved. Food Preparation and Theory. Prentice-Hall Inc., Englewood Clifffd, New Jersey.1986.
7	Al-Khusaibi, M., Al-Habsi, N., & Rahman, M. S. (Eds.). (2019). Traditional Foods: History, Preparation, Processing and Safety. Springer Nature.
8	Kristbergsson, K., & Oliveira, J. (2016). Traditional Foods: General and Consumer Aspects (Integrating Food Science and Engineering Knowledge Into the Food Chain, 10)(2016 ed.).
9	Galanakis, C. M. (Ed.). (2019). Innovations in traditional foods. Woodhead Publishing.

Date

Signature of Chairperson



Government of Karnataka

**Curriculum**

Program Name	BSc Nutrition and Dietetics		Semester	Fourth Sem
Course Title	Human Physiology ( <b>Theory</b> )			
Course No.	NDT4.1	DSC 4	No. of Credits	4+2
Contact hours	56 Hrs		Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40		Summative Assessment Marks	60

**Objectives**

1. To understand the structure and functions of different organsystems
2. To learn about fundamental concepts in pathogenesis of diseases – inflammation
3. To learn measurement and estimation methods for various physiological components
4. To build a strong foundation of human physiology which is critical in understanding of nutritional science

**Course Outcomes (COs):** At the end of the course the student should be able to:

CO1: Gain knowledge about the cellular components, the role of blood and its components

CO2: Learn about the functions and components of the lymphatic and immune system

CO3: Gather in-depth the physiology of the cardiovascular, nervous, musculoskeletal, respiratory, digestive, reproductive, and endocrine systems

CO4: Understand the concepts involved in pathogenesis of diseases – inflammation

<b>Content</b>	<b>56 Hrs</b>
<b>Unit–I Blood, Lymphatic, and Immune System</b>	
Cell structure and function, cell membrane composition, fluid mosaic model, membrane proteins. Blood: Components of blood, functions of plasma proteins, erythropoiesis, coagulation cascade Lymphatic system and spleen Immune system: Innate, acquired, cell mediated and humoral immunity. Role of T and B cells, leukocytes, granulocytes, monocytes, macrophage. Inflammation, pro- and anti-inflammatory cytokines.	12 Hrs

<b>Unit -II - Cardiovascular and Respiratory System</b>	
Heart – cardiac muscle, cardiac cycle, heart rate and regulation, blood pressure-regulation and physiological variations.  Respiratory system – Organs and functions, internal and external respiration, regulation, principles of gas exchange. Transport of oxygen and carbon Dioxide. Role of Hb as a buffer system. Cardio-respiratory response to exercise and effects of training.	15 Hrs
<b>Unit -III Gastrointestinal and Renal System</b>	
Digestive system – Organs, structure, layers of GIT, enteric nervous system, role of hormones in gut motility, mechanical and chemical digestion, secretory and absorptive function.  Liver – structure, functions, gall bladder. Pancreas – structure, exocrine functions.  Renal system – Structure and functions. Regulation of GFR, renal blood flow. Urine formation and regulation, water, electrolyte, and acid base balance	14 Hrs
<b>Unit -IV Musculoskeletal, Nervous, Endocrine and Reproductive System</b>	
Musculoskeletal system – Structure and function of bone, cartilage, and connective tissue; Types of muscles-structure and function. Exercise physiology.  Nervous system – Review of structure and function of neuron, conduction of nerve impulse, synapse, organization of CNS. Structure and function of brain and Spinal cord, CSF.  Hypothalamus –appetite and sleep regulation.  Endocrine system – Functions and regulation of hormone of pituitary, thyroid, adrenal, parathyroid, pancreas (endocrine). Disorders of endocrine glands.  Role of adipose tissue as an endocrine organ. Reproductive system: Male and female reproductive systems – functions. Menstrual cycle	15 Hrs

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)										
	1	2	3	4	5	6	7	8	9	10	11
Gain knowledge about the cellular components and role of blood and its components			X								
Learn about the functions and components of the lymphatic an			X								
Gather in depth the physiology of the cardiovascular, nervous, musculoskeletal, respiratory, digestive, reproductive, and endocrine systems			X								
Understand the concepts involved in pathogenesis of diseases – inflammation			X								

## Pedagogy-

<b>Formative Assessment:</b>	
<b>Assessment Occasion/ type</b>	<b>Weightage in Marks</b>
Test 1	10
Test 2	10
Assignment / Seminar	5+5
Project	10
<b>Total</b>	<b>40 Marks</b>

Course Title	<b>Human Physiology (Practical)</b>	Practical Credits	<b>2</b>
Course No.	<b>NDP4.1</b>	Contact hours	<b>4 Hrs/Week</b>

### List of Experiments to be conducted

1. Microscopic examination of Basic tissues.
2. Estimation of haemoglobin -Sahli's Method
3. Interpretation of RBC indices -blood group, RBC count demo
4. Measurement of blood pressure and heart rate and pulse at rest and after exercise.
5. Measurement of respiratory function – spirometer, oxygen saturation (pulse oximeter)
6. Measurement of muscle strength using hand grip dynamometer
7. Body composition measurement for muscle mass (using BIA) and fat mass (using BIA and skinfold callipers)

**Pedagogy-** Lecture, Group discussion, Presentation and Assignments

<b>Formative Assessment</b>	
<b>Assessment Occasion/ type</b>	<b>Weightage in Marks</b>
Test 1	05
Test 2	05
Practical record	10
Participation & Involvement	05
<b>Total</b>	<b>25 Marks</b>

<b>References</b>	
1	Hall, J. E., Guyton, A. C. (2010). Guyton and Hall Textbook of Medical Physiology E-Book. United Kingdom: Elsevier Health Sciences.
2	Waugh, A., Grant, A., Grant, A. W., Chambers, G. (2006). Ross and Wilson Anatomy and Physiology in Health and Illness. United Kingdom: Churchill Livingstone.
3	McArdle, W. D., Katch, F. I., Katch, V. L. (2010). Exercise Physiology: Nutrition, Energy, and Human Performance. United Kingdom: Lippincott Williams & Wilkins.
4	Ganong, W. F. (2005). Review of Medical Physiology. United Kingdom: McGraw-Hill Education.
5	Tortora, G. J., Derrickson, B. (2017). Tortora's Principles of Anatomy and Physiology. United States: Wiley.

Date:

Subject Committee Chairperson



Government of Karnataka

**Curriculum**

Program Name	BSc Nutrition and Dietetics		Semester	Fourth Sem
Course Title	Nutrition in weight management– (Theory)		(OPEN ELECTIVE)	
Course No.	NDT4.2	OE 4	No. of Credits	3
Contact hours	45 Hrs		Duration of SEA/Exam	2 Hours
Formative Assessment Marks	40		Summative Assessment Marks	60

**Course Outcomes (COs):** At the end of the course the student should be able to:

1. Gain knowledge about issues regarding body weight and their implication on health.
2. Familiarize with popular fad diets and related health concerns.
3. Understand the macronutrient and micronutrient guidelines for weight management.
4. Comprehend the dietary requirements to support exercise for weight management.

Content	45 Hrs
<b>Unit-I Understanding Body Weight</b>	
Body weight components – water, fat, muscle, bone mass Assessment - ideal body weight, BMI, classification of BMI for Asians, waist circumference, hip circumference Undernutrition – definition, causes, consequences Overnutrition – obesity, causes, consequences	12 Hrs
<b>Unit -II - Macronutrients, Micronutrients and Functional Foods for Weight Management</b>	
Fad diets – concept, overview of the popular diets, impact on health Macronutrients – role and recommendations for weight management: Carbohydrates – simple and complex, sources Dietary fibre – soluble and insoluble, sources Protein – protein quality – high biological value Fats – SFA, MUFA, PUFA, sources Common nutrient deficiencies – calcium, iron, vit D, folic acid, B12 Sources and role of antioxidants in weight management Functional foods – probiotics, prebiotics for gut health and weight issues	18 Hrs

<b>Unit -III Diet and Physical Activity for Weight Management</b>	
Aerobic and resistance exercise	15 Hrs
Recommendations for physical activity/exercise	
Exercises for fat loss and muscle gain	
Role of diet in physical activity and weight management	
Health benefits of exercise	

**Course Articulation Matrix: Mapping of Course Outcomes (COs) with Program Outcomes (POs 1-12)**

Course Outcomes (COs) / Program Outcomes (POs)	Program Outcomes (POs)											
	1	2	3	4	5	6	7	8	9	10	11	12
Gain knowledge about issues regarding body weight and their implication on health.	X											
Familiarize with popular fad diets and related health concerns.	X	X										
Understand the macronutrient and micronutrient guidelines for weightmanagement.	X	X										
Comprehend the dietary requirements to support exercise for weight management.	X	X										

**Pedagogy-** Lecture, Group discussion, Demonstrations

<b>Formative Assessment:</b>	
Assessment Occasion/ type	Weightage in Marks
Test 1	10
Test 2	10
Assignment / Seminar	5+5
Project	10
<b>Total</b>	40 Marks



References	
1	Nix S (2009) William's Basic Nutrition & Diet Therapy, 13th edition, Missouri: Mosby
2	Agarwal A and Udipi SA (2014) Textbook of Human Nutrition. New Delhi: Jaypee Brothers Medical Publishers.
3	B. Srilakshmi, V. Suganthi, C Kalaivani Ashok. (2016). Exercise Physiology, Fitness and Sports Nutrition. New Delhi: New Age International Publishers.

Date:

Subject Committee Chairperson