

# **FATIMA COLLEGE (AUTONOMOUS)**



**Re-Accredited with “A” Grade by NAAC (3<sup>rd</sup> Cycle)  
74<sup>th</sup> Rank in India Ranking 2019 (NIRF) by MHRD  
Maryland, Madurai- 625 018, Tamil Nadu, India**

**NAME OF THE DEPARTMENT : HOME SCIENCE**

**NAME OF THE PROGRAMME : UG**

**PROGRAMME CODE : UAHS**

**ACADEMIC YEAR : 2021-2022**

## **VISION OF THE DEPARTMENT**

To empower the potential Home Makers & Home Scientists with life management skills to face the multidimensional challenges and contribute towards the progress of Home and Nation.

## **MISSION OF THE DEPARTMENT**

- Empowering the budding youth to play the dual role of bread winner and homemaker effectively.
- Making them economically independent and emotionally stable.
- Enhancing their managerial skills at home and in the workplaces.
- Instilling their leadership qualities and organizational capabilities.
- Promoting their entrepreneurial skills.
- Fine tuning their intellect on the recent advances.

## **PROGRAMME EDUCATIONAL OBJECTIVES (PEO)**

<b>PEO 1</b>	Our graduates will excel in playing the dual role of home maker and bread winner through the knowledge gained in all the major areas of Home Science
<b>PEO 2</b>	The skills acquired through Home Science education enable the home scientists to fit various job roles in addition to becoming successful young entrepreneurs
<b>PEO 3</b>	They will be socially responsible citizens by exhibiting their professional competence by involving in lab to land programmes at regional, national, and international levels
<b>PEO 4</b>	Able to exhibit professional competence in diet planning and counselling.

**GRADUATE ATTRIBUTES (GA)**

Fatima College empowers her women graduates holistically. A Fatimite achieves all-round empowerment by acquiring Social, Professional and Ethical competencies. A graduate would sustain and nurture the following attributes:

<b>I. SOCIAL COMPETENCE</b>	
<b>GA 1</b>	Deep disciplinary expertise with a wide range of academic and digital literacy
<b>GA 2</b>	Hone creativity, passion for innovation and aspire excellence
<b>GA 3</b>	Enthusiasm towards emancipation and empowerment of humanity
<b>GA 4</b>	Potentials of being independent
<b>GA 5</b>	Intellectual competence and inquisitiveness with problem solving abilities befitting the field of research
<b>GA 6</b>	Effectiveness in different forms of communications to be employed in personal and professional environments through varied platforms
<b>GA 7</b>	Communicative competence with civic, professional, and cyber dignity and decorum
<b>GA 8</b>	Integrity respecting the diversity and pluralism in societies, cultures, and religions
<b>GA 9</b>	All – inclusive skill sets to interpret, analyze, and solve social and environmental issues in diverse environments
<b>GA 10</b>	Self-awareness that would enable them to recognize their uniqueness through continuous self-assessment in order to face and make changes building on their strengths and improving their weaknesses

<b>GA 11</b>	Finesse to co-operate exhibiting team-spirit while working in groups to achieve goals
<b>GA 12</b>	Dexterity in self-management to control their selves in attaining the kind of life that they dream for
<b>GA 13</b>	Resilience to rise instantly from their intimidating setbacks
<b>GA 14</b>	Virtuosity to use their personal and intellectual autonomy in being life-long learners
<b>GA 15</b>	Digital learning and research attributes
<b>GA 16</b>	Cyber security competence reflecting compassion, care and concern towards the marginalized
<b>GA 17</b>	Rectitude to use digital technology reflecting civic and social responsibilities in local, national, and global scenario
<b>II. PROFESSIONAL COMPETENCE</b>	
<b>GA 18</b>	Optimism, flexibility, and diligence that would make them professionally competent
<b>GA 19</b>	Prowess to be successful entrepreneurs and become employees of trans-national societies
<b>GA 20</b>	Excellence in local and global job markets
<b>GA 21</b>	Effectiveness in time management
<b>GA 22</b>	Efficiency in taking up initiatives
<b>GA 23</b>	Eagerness to deliver excellent service
<b>GA 24</b>	Managerial skills to identify, commend and tap potentials



<b>III. ETHICAL COMPETENCE</b>	
<b>GA 25</b>	Integrity and be disciplined in bringing stability leading a systematic life promoting good human behaviour to build better society
<b>GA 26</b>	Honesty in words and deeds
<b>GA 27</b>	Transparency revealing one's own character as well as self-esteem to lead a genuine and authentic life
<b>GA 28</b>	Social and environmental stewardship
<b>GA 29</b>	Readiness to make ethical decisions consistently from the galore of conflicting choices paying heed to their conscience
<b>GA 30</b>	Right life skills at the right moment

### PROGRAMME OUTCOMES (PO)

On completion of B.Sc. Home Science with Food Biotechnology Programme, the graduates would be able to

<b>PO 1</b>	Apply acquired scientific knowledge to solve complex issues
<b>PO 2</b>	Attain Analytical skills to solve complex cultural, societal, and environmental issues.
<b>PO 3</b>	Employ latest and updated tools and technologies to analyze complex issues.
<b>PO 4</b>	Demonstrate professional ethics that foster community, nation and environment building initiatives.

**PROGRAMME SPECIFIC OUTCOMES (PSO)**

On completion of B.Sc. Home Science with Food Biotechnology Programme, the graduates will have the following attributes

<b>PSO1</b>	Understanding the anatomy and functions of the various systems of the human body.
<b>PSO 2</b>	Acquisition of skills in analyzing& estimating various blood parameters.
<b>PSO 3</b>	Scientific knowledge in the area of food and nutrition, food processing and production.
<b>PSO 4</b>	Acquisition of skills in planning therapeutic diets and diet counseling
<b>PSO 5</b>	Scientific knowledge on the role of microbes in food processing and production.
<b>PSO 6</b>	Acquisition of knowledge and skills in front office operation and housekeeping.
<b>PSO 7</b>	Professional competence in planning different cuisines and styles of food service.
<b>PSO 8</b>	Scientific knowledge in the conversion of fibre to fabric and technical textiles.
<b>PSO 9</b>	Acquisition of skills in pattern making, garment construction, wardrobe planning, care of clothes, surface ornamentation and fashion illustration.
<b>PSO 10</b>	Digital literacy in designing garments using Fashion Studio software and calculating the nutritive value of foods using Nutrical software
<b>PSO 11</b>	Understanding the basic aspects that are related to the growth of children at different stages.
<b>PSO 12</b>	Cognizance on children with special needs.
<b>PSO 13</b>	Obtain knowledge on developmental changes that occur at different stages of life span.
<b>PSO 14</b>	Vivid knowledge on the contemporary problems related to marriage & family
<b>PSO 15</b>	Perception on theories & philosophies of preschool education.

<b>PSO 16</b>	Professional competency in creche and preschool management
<b>PSO 17</b>	Creative thinking in application of elements & principles of design in interior decoration and clothing.
<b>PSO 18</b>	Professional competency in the management of family resources
<b>PSO 19</b>	Obtain skills in arrangement of tables and other accessories.
<b>PSO 20</b>	Develop skills in the application of colors, furniture arrangement, lightings, flower arrangement and management of resources in day- to-day life.
<b>PSO 21</b>	Professional competence attributing to an entrepreneur.
<b>PSO 22</b>	Acquire skills to transform the standard of living of rural people.
<b>PSO 23</b>	Practically assess the problems of people using participatory tools.

**FATIMA COLLEGE (AUTONOMOUS), MADURAI-18****THE RESEARCH CENTRE OF HOME SCIENCE***For those who joined in June 2019 onwards***PROGRAMME CODE: UAHS****PART – I – TAMIL / FRENCH / HINDI- 12 CREDITS****PART – I – TAMIL****Offered by The Research Centre of Tamil**

<b>S. NO</b>	<b>SEM.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>HRS</b>	<b>CRE DIT</b>	<b>CIA Mks</b>	<b>ESE Mks</b>	<b>TOT - MKs</b>
1.	<b>I</b>	<b>19TL1C1</b>	Language-Modern Literature	<b>5</b>	<b>3</b>	<b>40</b>	<b>60</b>	<b>100</b>
2.	<b>II</b>	<b>19TL2C2</b>	Language - Bakthi Literature	<b>5</b>	<b>3</b>	<b>40</b>	<b>60</b>	<b>100</b>
3.	<b>III</b>	<b>19TL3C3</b>	Language- Epic Literature	<b>5</b>	<b>3</b>	<b>40</b>	<b>60</b>	<b>100</b>
4.	<b>IV</b>	<b>19TL4C4</b>	Language-Sangam Literature	<b>5</b>	<b>3</b>	<b>40</b>	<b>60</b>	<b>100</b>
			<b>Total</b>	<b>20</b>	<b>12</b>			

**PART – I –FRENCH**

Offered by The Department of French

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CRE DIT	CIA Mks	ESE Mks	TOT. MKs
1.	I	19RL1C1	PART 1 LANGUAGE FRENCH	5	3	40	60	100
2.	II	19RL2C2	PART 1 LANGUAGE FRENCH	5	3	40	60	100
3.	III	19RL3C3	PART 1 LANGUAGE FRENCH	5	3	40	60	100
4.	IV	19RL4C4	PART 1 LANGUAGE FRENCH	5	3	40	60	100
			<b>Total</b>	<b>20</b>	<b>12</b>			

**PART – I – HINDI**

Offered by The Department of Hindi

S.N O	SEM.	COURSE CODE	COURSE TITLE	HRS	CRE DIT	CIA Mks	ESE Mks	TOT. MKs
1.	I	19DL1C1	PART 1 LANGUAGE HINDI - बोलचालकीह5दी	5	3	40	60	100
2.	II	19DL2C2	PART 1 LANGUAGE HINDI - कर्ालर्ीनह5दी	5	3	40	60	100
3.	III	19DL3C3	PART 1 LANGUAGE HINDI - ह5दीसाह5त्यकाआहदकालऔरभक्त िकाल	5	3	40	60	100
4.	IV	19DL4C4	PART 1 LANGUAGE HINDI - ह5दीसाह5त्यकाआधुहनककाल	5	3	40	60	100
			<b>Total</b>	<b>20</b>	<b>12</b>			

**PART – II -ENGLISH – 12 CREDITS**

Offered by The Research Centre of English

S. NO	SEM.	COURSE CODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT - MKS
1.	<b>I</b>	<b>19EL1LB</b>	BASIC COMMUNICATIVE ENGLISH	5	3	40	60	100
2.		<b>19EL1LI</b>	INTERMEDIATE COMMUNICATIVE ENGLISH	5	3	40	60	100
3.		<b>19EL1LA</b>	ADVANCED COMMUNICATIVE ENGLISH	5	3	40	60	100
4.	<b>II</b>	<b>19EL2LB</b>	ENGLISH COMMUNICATION SKILLS (BASIC)	5	3	40	60	100
5.		<b>19EL2LI</b>	ENGLISH FOR EMPOWERMENT (INTERMEDIATE)	5	3	40	60	100
6.		<b>19EL2LA</b>	ENGLISH FOR CREATIVE WRITING (ADVANCED)	5	3	40	60	100
7.	<b>III</b>	<b>19EL3LN</b>	ENGLISH FOR DIGITAL ERA	5	3	40	60	100
8.	<b>IV</b>	<b>19EL4LN</b>	ENGLISH FOR INTEGRATED DEVELOPMENT	5	3	40	60	100
			<b>Total</b>	<b>20</b>	<b>12</b>			

**ART – III -MAJOR, ALLIED & ELECTIVES – 95 CREDITS****MAJOR CORE COURSES INCLUDING PRACTICALS : 60 CREDITS**

S.N O	SEM	COURSE CODE	COURSE TITLE	HRS	CREDI T	CIA Mk s	ESE Mk s	TOT - Mks
1.	I	19N1CC1	HUMAN DEVELOPMENT	5	4	40	60	100
2.		19N1CC2	PHYSIOLOGY	4	3	40	60	100
3.		19N1CC3	LAB IN PHYSIOLOGY	3	2	40	60	100
4.	II	19N2CC4	HUMAN NUTRITION	5	4	40	60	100
5.		19N2CC5	FOOD SCIENCE	4	3	40	60	100
6.		19N2CC6	LAB IN FOOD SCIENCE & NUTRITION	3	2	40	60	100
7.	III	19N3CC7	EXTENSION EDUCATION AND COMMUNICATI ON	5	4	40	60	100
8.		19N3CC8	FIBER TO FABRIC	4	3	40	60	100
9.		19N3CC9	LAB IN BASICS OF CLOTHING CONSTRUCTIO N	3	2	40	60	100

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10.	IV	19N4CC10	BASICS OF FOOD BIOTECHNOLOGY	5	4	40	60	100
11.		19N4CC11	CLOTHING AND FASHION	4	3	40	60	100
12.		19N4CC12	LAB IN CLOTHING AND FASHION	3	2	40	60	100
13.	V	19N5CC13	CRECHE AND PRE SCHOOL MANAGEMENT	6	4	40	60	100
14.		19N5CC14	LAB IN PRE SCHOOL ADMINISTRATION	4	2	40	60	100
15.		19N5CC15	HOUSING AND ART IN HOME	6	4	40	60	100
16.		19N5CC16	LAB IN ART IN EVERYDAY LIFE	4	2	40	60	100
17.	VI	19N6CC17	RESOURCE MANAGEMENT	5	4	40	60	100
18.		19N6CC18	LAB IN RESOURCE MANAGEMENT	3	2	40	60	100
19.		19N6CC19	CLINICAL NUTRITION AND DIETETICS	5	4	40	60	100
20.		19N6CC20	LAB IN CLINICAL NUTRITION AND DIETETICS	3	2	40	60	100



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21.	<b>Total</b>	<b>84</b>	<b>60</b>			
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**ALLIEDCOURSES- 20 CREDITS**

S.NO	SEM	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. MKS
1.	I	19N1ACC1	ALLIED CHEMISTRY- I	3	3	40	60	100
2.		19N1ACC2	VOLUMETRIC ANALYSIS	2	2	40	60	100
3.	II	19N2ACC3	ALLIED CHEMISTRY- II	3	3	40	60	100
4.		19N2ACC4	QUALITATIVE ORGANIC ANALYSIS	2	2	40	60	100
5.	III	19N3AC1	CATERING & HOTEL MANAGEMENT	3	3	40	60	100
6.		19N3AC2	LAB IN CATERING & HOTEL MANAGEMENT	2	2	40	60	100
7.	IV	19N4AC3	FOOD PRODUCTION AND SERVICE	3	3	40	60	100
8.		19N4AC4	LAB IN FOOD PRODUCTION AND SERVICE	2	2	40	60	100

**ELECTIVES-15 CREDITS**

S.No	SEM	COURSECODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ES E Mks	TOT . Mks
1.	V	19N5ME1	TECHNICAL TEXTILES	5	5	40	60	100
2.	V	19N5ME2	FOOD BIOTECHNOLOGY					
3.	VI	19N6ME3	FAMILY DYNAMICS	5	5	40	60	100
4.	VI	19N6ME4	NUTRITION FOR HEALTH AND FITNESS	5	5	40	60	100
5.	VI	19N6ME5	FOOD AND DAIRY PROCESSING	5	5	40	60	100
6.	VI	19N6ME6	WOMEN AND ENTREPRENEURSHIP DEVELOPMENT	5	5	40	60	100

**T – IV – 20 CREDITS**

- **VALUE EDUCATION**
- **ENVIRONMENTAL AWARENESS**
- **NON MAJOR ELECTIVE**
- **SKILL BASED COURSES**

S. No	SE M.	COURSE CODE	COURSE TITLE	HRS	CREDIT	CIA Mks	ESE Mks	TOT. Mks
1.	I	21G1VE1	Personal Values	1	1	40	60	100
2.		19N1NME	Non Major Elective – Basics of Nutrition (Offered to other major Students)	2	2	40	60	100
3.	II	21G2VE2	Values for life	1	1	40	60	100
4.		19N2NME	Non Major Elective -Basics of Nutrition (Offered to other major Students)	2	2	40	60	100
5.	III	19G3EE	Environmental Studies	1	1	40	60	100
6.		19N3SB1	Entrepreneurial Skills – Surface Ornamentation	2	2	40	60	100
7.	IV	19G4EE	Environmental Studies	1	1	40	60	100
8.		19N4SB2	Entrepreneurial Skills – CAD	2	2	40	60	100
9.		19N5SB3	Entrepreneurial Skills – Baking, Adulteration and Food Preservation	2	2	40	60	100
10.		19N5SB4	Entrepreneurial Skills – Participatory Rural Appraisal	2	2	40	60	100

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11.		19N6SB5	Entrepreneurial Skills – Nutrition Counselling	2	2	40	60	100
12.		19N6SB6	Entrepreneurial Skills – Interior Design and Decoration	2	2	40	60	100

## OFF-CLASS PROGRAMMES - ALL PART-V

## SHIFT - I

S. No	SE M.	COURSE CODE	COURSE TITLE	HRS	CRE DIT	TOT. Mks
1.	I - IV	21A4PED	Physical Education	30/ SEM	1	100
2.		21A4NSS	NSS			
3.		21A4NCC	NCC			
4.		21A4WEC	Women Empowerment Cell			
5.		21A4ACUF	AICUF			

## OFF-CLASS PROGRAMMES

## ADD-ON COURSES

COURSE CODE	COURSE TITLE	HR S.	CRE DITS	SEME STER IN WHICH THE COURSE IS OFFERED	CIA Mks	ES E Mks	TOT AL Mks
21UADCA	COMPUTER APPLICATIONS (offered by the	40	2	I & II	40	60	100

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COURSE CODE	COURSE TITLE	HR S.	CRE DITS	SEME STER IN WHIC H THE COUR SE IS OFFE RED	CIA Mks	ES E Mk s	TOT AL Mks
	department of PGDCA for Shift I)						
21USDFCS	<b>ONLINE SELF LEARNING COURSE-</b> Foundation Course for Science	40	2	II	40	60	100
21UAD3ES	Professional Ethics	15	1	III	40	60	100
21UAD4ES	Personality Development	15	1	IV	40	60	100
21UAD5ES	Family Life Education	15	1	V	40	60	100
21UAD6ES	Life Skills	15	1	VI	40	60	100
21UAD5HR	<b>HUMAN RIGHTS</b>	15	2	V	100	-	100
21UAD6RS	<b>OUTREACH PROGRAMME-</b> Reach Out to Society through Action <b>ROSA</b>	100	3	V & VI	100	-	100
21UAD6PR	<b>PROJECT</b>	30	4	VI	40	60	100
21UAD6RC	<b>READING CULTURE</b>	10/ Se mes ter	1	II-VI	-	-	-
<b>TOTAL</b>			<b>20</b>				

**SELF LEARNING EXTRA CREDIT COURSES**

<b>COURSE CODE</b>	<b>COURSE</b>	<b>HR S.</b>	<b>CREDI TS</b>	<b>SEMES TER IN WHICH THE COURSE IS OFFER ED</b>	<b>CIA MK S</b>	<b>ES E MK S</b>	<b>TOTA L MAR KS</b>
21UG1SLN	<b>SELF LEARNING COURSES for ADVANCED LEARNERS</b> <b>Nutrition for Health and Fitness</b>		2	I	40	60	100
21UG2SLN	<b>Basics of Psychology</b>	-	2	II	40	60	100
21UG4SLZ A	<b>Public Health and Hygiene</b>		2	IV	40	60	100
21UG4SLN B	<b>Textile Colouration</b>		2	IV	40	60	100

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21UG5SLA	<b>Consumerism</b>		2	V	40	60	100
21UG6SLN	<b>Hospital Management</b>		2	VI	40	60	100

## OFF CLASS PROGRAMMES

COURSE CODE	COURSE	HR S.	CREDIT S	SEMESTER IN WHICH THE COURSE IS OFFERED	CIA MK S	ESE MK S	TOTAL MARK S
21UGVA H1	VALUE ADDED CRASH COURSE Hand Embroidery	-	2	ANY SEMESTER	40	60	100
21UGVA CH1	VALUE ADDED CERTIFICATE COURSE Montessori Aid	-	2	ANY SEMESTER	40	60	100

	<b>Teaching</b>						
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## I B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY SEMESTER –I

*For those who joined in 2019 onwards*

PROGRA MME CODE	COURSE CODE	COURSE TITLE	CATEGO RY	HRS/WEEK	CREDITS
UAHS	19N1CC1	HUMAN DEVELOPMENT	Lecture	5	4

### COURSE DESCRIPTION

This course gives a complete picture of the developmental changes takes place across the stages

### COURSE OBJECTIVES

To enable students

- Understand the fundamentals of Human Development
- Get to know information on milestones in all round development of children
- Orient on various childhood problems and disabilities

### UNITS

#### **UNIT –I CONCEPT OF HOME SCIENCE AND GROWTH & DEVELOPMENT**

**(15HRS.)**

- a) Meaning, needs and role of Home Science for personality and family development.
- b) Definition, Principles and Factors influencing growth and development
- c) Pregnancy, Symptoms, discomforts and complications
- d) Prenatal stage - Period gestation, Period of embryo, Period of fetus, factors affecting prenatal development

#### **UNIT –II DEVELOPMENT STAGES (Birth-Infancy)**

**(15 HRS.)**

- a) Birth process and Types of birth
- b) Infancy
  - a. Neonate and Partunate
  - b. Physical and motor, cognitive emotional, language and social development.



c. Care of an infant - breast feeding & artificial feeding, weaning and supplementary feeding, toilet Training, Sleep routines, and hygienic practices.

d. Common ailments and treatments -Immunization schedule

e) Babyhood - Physical and motor, cognitive emotional, language and social development

**Self-Study: Common ailments and treatments -Immunization schedule**

### **UNIT -III DEVELOPMENTAL STAGES (Early childhood) (15 HRS.)**

Early Childhood (3-6 yrs)

a) Physical and motor, cognitive, language, social and emotional development.

b) Importance of Preschool years.

### **UNIT -IV DEVELOPMENTAL STAGES (Childhood to Adolescence) (15 HRS.)**

Middle Childhood (6 -12 years)

Physical and motor, cognitive, language, social and emotional development.

Adolescence (12 – 20 Yrs)

**Self-Study: Physical and motor development, cognitive, social, and emotional development.**

### **UNIT -V CHILDHOOD PROBLEMS (15 HRS.)**

a) Behavior problems - Causes& Prevention, Temper Tantrums, Thumb Sucking, bed wetting, Masturbation, nail biting and Juvenile delinquency, habit and habit formation

b) Children with special needs - a brief study -Physically impaired (Orthopedic, Visual, Hearing, Speech) Mental retardation, gifted and Juvenile Delinquency.

c) Parental styles;Different methods of disciplining children and their effects

### **REFERENCES:**

#### **TEXTBOOK:**

1.Devadas R.P &JayaN, (1994) *Textbook on Child Development*, Macmillan and Co, New Delhi.

#### **REFERENCE BOOKS:**

2.Helen, B. (1995) *Developing Child*, HarperCollins Publishers

3.Hurlock E.B, (1981) *Developmental psychology: a life-span approach* Tata McGraw -Hill, NewYork.

4.Hurlock E. B, (2004). *Child Development*, (6<sup>th</sup> ed). , McGraw Hill Inc.,NewYork.

5.Santrock J.W, (2014) *Child Development*, McGraw Hill Inc.,New York.

6. Shrimali S.S, (2008) *Child Development*, Rawat publications, NewDelhi.  
 7. Suria Kanthi A. (2004) *Child development- An introduction*. Kavitha Publications, Gandhigram, TamilNadu

**OPEN EDUCATIONAL REFERENCES:**

1. <https://open.umn.edu/opentextbooks/textbooks/750>
2. <https://libguides.wccnet.edu/oer-subjects/human-growth-development>
3. <https://libguides.humboldt.edu/openedu/cd>
4. <https://mtsac.libguides.com/oer/child-development>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 CONCEPT OF HOME SCIENCE AND GROWTH &amp; DEVELOPMENT</b>				
1.1	Meaning, Need for Home Science	2	Chalk & Talk	Black Board
1.2	Role of Home Science for personality and family development.	2	Chalk & Talk	LCD & White board
1.3	Growth & Development Definition, Principles and Factors influencing growth and development	4	Lecture	PPT & Black Board
1.4	Pregnancy, Symptoms, discomforts and complications	6	Lecture	PPT & Specimens
1.5	Prenatal stage - Period of gestation, Period of embryo,	3	Lecture	PPT & Smart Board

	Period of fetus,			
1.6	Factors affecting prenatal development	1	Lecture & Discussion	Google classroom
<b>UNIT -2 DEVELOPMENT STAGES (Birth – Infancy)</b>				
2.1	Birth process Birth process and Types of birth	2	Lecture	PPT& Black Board
2.2	Infancy Neonate and Partunate	1	Chalk & Talk	Green Board
2.3	Physical and motor, & cognitive Development	3	Chalk & Talk	Black Board
2.4	Emotional, language and social development.	3	Chalk & Talk	LCD & White board
2.5	Care of an infant - breast feeding & artificial feeding, weaning and supplementary feeding, toilet Training, Sleep routines, and hygienic practices.	3	Chalk & Talk	LCD & Smart Board
2.6	Babyhood Physical and Motor development	2	Lecture	PPT & White board
2.7	Cognitive and Language development	2	Lecture	PPT& Black Board
2.8	Emotional and Social development	2	Lecture	Google classroom
<b>UNIT -3 DEVELOPMENTAL STAGES (Early Childhood)</b>				
3.1	Early Childhood	4	Chalk &	Black Board

	Physical and Motor development		Talk	
3.2	Cognitive development	2	Lecture	PPT& Black Board
3.3	Emotional and Social development	4	Chalk & Talk	LCD & Smart Board
3.4	Language development and Problems	4	Chalk & Talk	Black Board
3.5	Importance of Preschool years	2	Chalk & Talk	Smart Board
<b>UNIT -4 DEVELOPMENTAL STAGES (Middle Childhood - Adolescence)</b>				
4.1	<b>Middle Childhood</b> (6 -12 years) Physical and Motor development	3	Lecture	Smart Board
4..2	Cognitive, and Language, development	3	Chalk & Talk	LCD
4.3	Social and Emotional development	3	Lecture	PPT & White board
4.4	Adolescence (12 – 20 Yrs) Physical and motor development	2	Lecture	Smart Board
4.5	Cognitive development	2	Lecture	Black Board
4.6	Social Development	2		
4.7	Problems associated with Adolescence	3	Chalk & Talk	LCD
<b>UNIT -5 CHILDHOOD PROBLEMS</b>				

5.1	Behavior problems - Causes & Prevention. Temper Tantrums, Thumb Sucking, bed wetting, Masturbation, nail biting	3	Lecture	Green Board Charts
5.2	Juvenile delinquency, Habit and Habit formation	3	Chalk & Talk	Green Board
5.3	Children with special needs a brief study-Physically impaired (Orthopedic, Visual, Hearing, Speech)	4	Lecture	PPT & White board
5.4	Mental retardation, gifted and Juvenile Delinquency	4	Chalk & Talk	LCD
5.5	Parental styles Different methods of disciplining children and their effects	4	Chalk & Talk	Smart Board

CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignme nt	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non -Scholastic	5
<b>TOTAL</b>	<b>40</b>

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for I UG are:

**K1- Remember, K2-Understand, K3-Apply, K4-Analyse**

### EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non - Scholastic

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	The students will be able to define and understand the principles of growth and development	K1,K2	PSO11

CO 2	Describe pregnancy, prenatal and birth process	K1, K2	PSO13
CO 3	Explain the developmental changes occur in different stages of human lifespan.	K1, K3	PSO11 and 13
CO 4	Solve problems of childhood and adolescence.	K2,K3	PSO12 and13
CO 5	Identify and explore on children with special needs	K4,K2	PSO12

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
<b>CO1</b>	1	1	1	1	1	1	1	1	1	1	3	1
<b>CO2</b>	1	1	1	1	1	1	1	1	1	1	3	1
<b>CO3</b>	1	1	1	1	1	1	1	1	1	1	3	1
<b>CO4</b>	1	1	1	1	1	1	1	1	1	1	1	3



## CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

<b>CO5</b>	1	1	1	1	1	1	1	1	1	1	1	3
<b>CO/ PSO</b>	<b>PSO 13</b>	<b>PSO 14</b>	<b>PSO 15</b>	<b>PSO 16</b>	<b>PSO 17</b>	<b>PSO 18</b>	<b>PSO 19</b>	<b>PSO 20</b>	<b>PSO 21</b>	<b>PSO 22</b>	<b>PSO 23</b>	
<b>CO1</b>	3	1	1	1	1	1	1	1	1	1	1	
<b>CO2</b>	3	1	1	1	1	1	1	1	1	3	1	
<b>CO3</b>	3	1	1	1	1	1	1	1	1	1	1	
<b>CO4</b>	3	1	1	1	1	1	1	1	1	1	1	
<b>CO5</b>	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with Pos**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	1	3	1	1
CO2	1	2	1	1
CO3	1	1	1	1
CO4	1	3	1	3
CO5	2	2		3

**Note: Strongly Correlated – 3****“ Moderately Correlated – 2****“ Weakly Correlated -1**

**COURSE DESIGNER:**  
**Staff Name:Dr.S.Santhi**

**Forwarded By**

**(Dr.Vasantha Esther Rani)**

# I B.Sc. HOME SCIENCE WITH FOOD BIO TECHNOLOGY

## SEMESTER -I

*(For those who joined in 2019 onwards)*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UG-UAHS	19N1CC2	Physiology	Lecture	4	4

### COURSE DESCRIPTION

The course provides a detailed insight on the anatomy and functions of the various systems of the human body.

### COURSE OBJECTIVES

- Location and anatomy of the organs of the body.
- The functions of the different organ systems of the body, with special reference to the control and feedback mechanisms
- Physiological changes at different stages of life.
- Methods of artificial respiration and family planning.

### UNIT-I DIGESTIVE AND EXCRETORY SYSTEM [15 HRS]

Anatomy and functions of the organs of the digestive system oral cavity, stomach, small intestine, large intestine, pancreas, liver; Saliva-composition, function, Bile - composition, function ; process of digestion, absorption and assimilation of food. Movements of the gastro intestinal tract - deglutition, gastric tone, digestive peristalsis, pendular, segmenting movements, anti-peristalsis, Peristaltic rush, gastro colic reflex, Vomiting.

### EXCRETORY SYSTEM

Kidneys, Nephron - Structure and functions, renal circulation, Juxta glomerular apparatus; Urine - composition, volume and formation of urine, micturition. Urinary Bladder Structure, filling of bladder, impairment of renal function.

### UNIT-II BLOOD AND CIRCULATORY SYSTEM [15 HRS]

Blood - Composition, functions and volume, Erythrocytes, Leucocytes, Thrombocytes - types, erythropoiesis, leucopoiesis, fate, functions; Haemoglobin, Erythrocyte sedimentation rate, haemolysis, leucocytosis, leucopenia, leukemia, polycythemia, anaemia.

Structure and functions of the heart and blood vessels, Junctional tissues, cardiac cycle, Blood pressure- factors affecting blood pressure, ECG, heart sound, cardiac output, regulation of heart rate, pulse.

**Self Study: Blood coagulation, blood grouping transfusion, RH factor, Erythroblastosis foetalis.**

### **UNIT-III RESPIRATORY SYSTEM**

**[10 HRS]**

Anatomy of respiratory pathway, lung unit, Mechanism of respiration, lung volumes, Gaseous exchange in tissues, lungs, transport of O<sub>2</sub> and CO<sub>2</sub> chloride shift; Regulation of respiration - nervous, chemical, Herring Brewers reflex; types of breathing; modified forms of respiration Hypoxia, Asphyxia, Cyanosis, Oxygen debt; Artificial Respiration.

### **UNIT-IV REPRODUCTIVE AND ENDOCRINE SYSTEM**

**[10 HRS]**

Anatomy of male and female reproductive organs menstrual cycle, process of reproduction and lactation, conception and contraception.

Structure and functions of pituitary, thyroid and adrenal glands

### **UNIT-V SENSE ORGANS, NERVOUS SYSTEM and MUSCULOSKELETAL SYSTEM [10 HRS]**

Structure and functions of Eye, Ear and Skin –regulation of body temperature.

Structure and functions of neuron, brain and spinal cord; Autonomic nervous system, Reflex Action.

Musculoskeletal system – Types of muscles, functions; skeletal system-formation of bone

**Self Study: Structure and functions of Eye, Ear and Skin –regulation of body temperature.**

### **REFERENCES:**

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#### **TEXT BOOKS**

1. Ahuja (2001) *Textbook of Physiology*, CBS Publishers.
2. Best, C.H., and Taylor, R.B.(1975) *The Physiological Basis for Medical Practice*; The William and Wilkinson Scientific Book Company, Kolkata.
3. Chatterjee C. C (1988) *Text book of Medical physiology*, W B Saunder's Co, London.
4. Jain, A.K.(1989) *Textbook of Physiology*. Vol.I and II. Avichal Publishing Co., New Delhi.
5. S.Subramanian and S.M.Kutty ( 1971)*Text Book of Physiology*, Orient Longman.

#### **REFERENCE BOOKS**

1. C.C. Chatterjee's .(2016) *Human Physiology*, 11e, Vol.1,CBS Publishers
2. Guyton,A.C, (2009).*Function of the Human body*, 4<sup>th</sup> Edition, W.B.Sanders Company, Philadelphia.
3. Guyton,A.C,and Hall,J.B.(2010).*Text Book of Medical Physiology*, 9<sup>th</sup> Edition, W.B. Sanders Company, Prime Books (Pvt.) Ltd., Bangalore

4. Gerald R.Graham (2008). *Textbook of Physiology*, PMC Company., US.
5. Muthaiya N. M (2006). *Human Physiology*, 4<sup>th</sup> Edition , Jaypee Brothers Medical Publishers Ltd, New Delhi .
6. Sujit E. Chaudhuri(2008). *Concise medical physiology*, 6<sup>th</sup> Edition, Jain Book Depot, New Delhi.
7. Winwood (1988). *Sear's Anatomy and Physiology for nurses*, Edward Arnold, London
8. Sembulingam & Prema Sembulingam (2006), *Essentials of Medical Physiology*, Jaypee Brothers, Medical Publishers (p) Ltd, New Delhi.

#### Open Educational Resources:

1. <https://libguides.wccnet.edu/oer-subjects/anatomy-physiologyvphsphysiology.com> -
2. <https://www.saylor.org/2013/07/human-anatomy-and-physiology-open-educational-resources/>
3. <https://openstax.org/details/books/anatomy-and-physiology>
4. [https://www.google.com/search?safe=active&rlz=1C1CHBD\\_enIN856IN857&sxsrf=ALeKk011EzMXNkY2v7mwMprR28dMp4NLIw:1618050929351&q=Physiology+textbook+pdf&sa=X&](https://www.google.com/search?safe=active&rlz=1C1CHBD_enIN856IN857&sxsrf=ALeKk011EzMXNkY2v7mwMprR28dMp4NLIw:1618050929351&q=Physiology+textbook+pdf&sa=X&)
5. <https://open.umn.edu/opentextbooks/textbooks/169>

#### COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 DIGESTIVE AND EXCRETORY SYSTEM</b>				
1.1	Anatomy and functions of the organs of the digestive system - oral cavity, stomach, small intestine, large intestine, pancreas, liver	2	Chalk & Talk Video	Model Specimen Black Board.
1.2	Saliva-composition, function, Bile composition, function	1	Chalk & Talk	LCD

1.3	Movements of the gastro intestinal tract deglutition, gastric tone, digestive peristalsis, Pendular, Segmenting movements, anti-peristalsis, Peristaltic rush, gastro colic reflex,	2	Lecture	Black Board, PPT
1.4	Vomiting; Jaundice.	1	Lecture	White board
1.5	Kidneys, Nephron, Structure and functions.	3	Lecture	Model Specimen, Black Board
1.6	Renal circulation, Juxta glomerular apparatus.	2	Lecture	Black Board
1.7	Composition, volume and formation of urine. micturition.	3	Lecture	PPT, Black Board
1.8	Urinary Bladder Structure, filling of bladder, impairment of renal function.	1	Discussion	Black Board
<b>UNIT -2                      BLOOD AND CIRCULATORY SYSTEM</b>				
2.1	Composition, functions and volume, polycythemia, anaemia	1	Lecture	Green Board Charts
2.2	Erythrocytes, Leucocytes, Thrombocytes types,	3	Chalk & Talk	Green Board
2.3	Functions; Haemoglobin, Erythrocyte sedimentation rate,	1	Discussion	Black Board

2.4	Leucopoiesis, haemolysis, leucocytosis, leucopenia, leukemia,	1	Lecture	Charts
2.5	Blood coagulation, blood grouping transfusion, RH factor, Erythroblastosis foetalis.	3	Lecture	Black Board
2.6	Structure and functions of the heart and blood vessels.	2	Discussion	Model Specimen, Black Board
2.7	Junctional tissues, Cardiac cycle	2	Lecture	Black Board
2.8	Blood pressure- factors affecting blood pressure	1	Lecture	Black Board
2.9	ECG, heart sound, cardiac output, regulation of heart rate, pulse.	1	Lecture	Black Board
<b>UNIT -3 RESPIRATORY SYSTEM</b>				
3.1	Anatomy respiratory pathway, lungs, lung unit	3	Lecture	Green Board Charts
3.2	Mechanism of respiration, lung volumes.	3	Chalk & Talk	Green Board
3.3	Gaseous exchange in tissues, lungs, transport of O <sub>2</sub> and CO <sub>2</sub> chloride shift.	2	Discussion	Black Board
3.4	Regulation of respiration - nervous, chemical -Herring Brewers reflex.	2	Lecture	Charts

3.5	Types of breathing; modified forms of respiration Hypoxia, Asphyxia, Cyanosis, Oxygen debt;	2	Lecture	PPT
3.6	Artificial Respiration	3	Demonstration	Video ppt.
<b>UNIT IV REPRODUCTIVE AND ENDOCRINE SYSTEM</b>				
4.1	Anatomy of male and female reproductive organs	2	Lecture	Green Board Charts
4.2	Menstrual cycle, process of reproduction and lactation	2	Chalk & Talk	Green Board
4.3	Conception and contraception	1	Discussion	Black Board
4.4	Structure and functions of pituitary,	2	Lecture	Charts
4.5	Thyroid and adrenal glands	3	Lecture	PPT
<b>UNIT V SENSE ORGANS AND NERVOUS SYSTEM</b>				
5.1	Structure and functions of Eye	1	Lecture	Green Board Charts
5.2	Structure and functions of Ear	1	Chalk & Talk	Green Board
5.3	Structure and functions of Skin & regulation of body temperature	3	Discussion	Black Board
5.4	Structure and functions of neuron, brain and spinal	1	Lecture	Charts



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	cord			
5.5	Structure and functions of brain	2	Lecture	PPT
5.6	Autonomic nervous system, Reflex Action	1	Lecture	Black Board
5.7	Physiology of sleep	1	Lecture	Black Board

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA

<b>Scholastic</b>	<b>35</b>
<b>Non Scholastic</b>	<b>5</b>
	<b>40</b>

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for I UG are:

**K1**- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

### EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non - Scholastic

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Recall the anatomy of the digestive and excretory system of the human body and infer their functions. Recall the anatomy of the digestive and excretory system of the human body and infer their functions.	K1, K4	PSO1
CO 2	Elaborate on the various aspects and components of blood and illustrate the anatomy of the heart with the circulatory system.	K1, K2	PSO1, PSO2
CO 3	Describe the anatomy of the respiratory system, determine the mechanism of respiration and focus on appropriate artificial respiration techniques during emergencies.	K1, K3, K4	PSO1
CO 4	Illustrate the anatomy of the reproductive systems. Outline the process of menstrual cycle, conception and lactation. Plan strategies to maintain family size.	K2, K4	PSO1
CO 5	Trace the anatomy of the nervous system. Summarise the functions of the CNS and ANS. Explain the physiology of sleep.	K2, K4	PSO1

### Mapping of COs with PSOs

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CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	3	2	1	1	1	1	1	1	1	1	1	1
CO2	2	3	1	1	1	1	1	1	1	1	1	1
CO3	3	2	1	1	1	1	1	1	1	1	1	1
CO4	2	2	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	2	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	3	1	1	1	1	1	1	1	1	1	

## Mapping of COs with POs

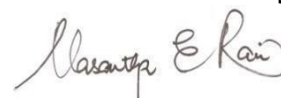
CO/ PSO	PO1	PO2	PO3	PO4
CO1	3	3	1	1
CO2	3	2	1	1
CO3	1	1	1	1
CO4	1	3	1	3

CO5	2	2	1	3
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**Note: Strongly Correlated – 3, Moderately Correlated – 2**  
**Weakly Correlated -1**

**COURSE DESIGNER:**

1. Staff Name: Dr. Vasantha Esther Rani
2. Staff Name: Ms. Magdalene Virjini

**Forwarded By**


(Dr. Vasantha Esther Rani)

**I B.Sc. HOME SCIENCE WITH FOOD BIO TECHNOLOGY**  
**SEMESTER –I**  
*(For those who joined in 2019 onwards)*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UG-UAHS	19N1CC3	LAB IN PHYSIOLOGY	Practical	3	2

**COURSE DESCRIPTION**

The course provides practical experience on the identification of various tissues, blood cells, estimation of haemoglobin, blood pressure and determination of clotting time, bleeding time and blood grouping.

**COURSE OBJECTIVES**

- To understand the methodology of determining the various blood parameters
- To identify the various tissues
- To assess the bleeding and clotting time
- To interpret the biochemical lab reports.

## COURSE OUTCOME

The students will be able to

1. Identify the various tissues of the body.
2. Illustrate and describe the blood cells.
3. Determine the hemoglobin level and blood pressure
4. To determine clotting time, bleeding time and blood grouping

### UNIT-I HISTOLOGY

[5 HRS]

Histology - Details of the various tissues — identification of slides a) Alimentary tract Stomach, intestines, Liver and Pancreas

- b) Lungs
- c) Kidney
- d) Endocrine glands
- e) Nervous system
- f) Skin

### UNIT-II BLOOD CELLS

[10 HRS]

Blood Cells — Fresh mount and stained, Differential Count

### UNIT-III RBC & WBC COUNT

[10 HRS]

RBC and WBC count using Neubauer's counting chamber.

### UNIT-IV HAEMOGLOBIN ANALYSIS & BLOOD GROUPING

[10 HRS]

Determination of haemoglobin — Sahli's Method. Blood grouping.

### UNIT-V BLOOD COAGULATION & BLOOD PRESSURE

[10 HRS]

Estimating the Clotting, bleeding time; ESR rate

Recording pulse rate and measurement of blood pressure. Interpretation of blood examination reports

## REFERENCES:

1. Best, C.H., and Taylor, R.B (1975) *The Physiological Basis for Medical Practice*; The William and Wilkinson Scientific Book Company, Kolkata.
2. Chatterjee C. C (1988) *Text book of Medical physiology*, W B Saunder's Co, London.
3. S.Subramanian and S.M.Kutty ( 1971) *Text Book of Physiology*, Orient Longman.
4. Guyton, A.C, and Hall, J.B. (2010). *Text Book of Medical Physiology*, 9<sup>th</sup> Edition, W.B. Sanders Company, Prime Books (Pvt.) Ltd., Bangalore.

## OPEN EDUCATION RESOURCES:

1. <https://library.csi.cuny.edu/oer/virtuallabs-simulations> [www.cvphysiology.com](http://www.cvphysiology.com) - Comprehensive explanation of basic cardiovascular concepts [simple.wikipedia.org/wiki/Digestion](http://simple.wikipedia.org/wiki/Digestion) - 17k
2. [www.medicalnewstoday.com/articles/11949.php](http://www.medicalnewstoday.com/articles/11949.php) - 59k

## COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lab hours	Teaching Pedagogy	Teaching Aids
<b>UNIT - HISTOLOGY</b>				
1.1	Histology - Details of the various tissues — Alimentary tract Stomach, intestines, Liver and Pancreas	3	Lecture- Identification of slides	Specimen slides
1.2	Lungs&Kidney	2	Lecture- Identification of slides	Specimen slides
1.3	Endocrine glands, Nervous system&Skin	2	Lecture- Identification of slides	Specimen slides
<b>UNIT -2 BLOOD CELLS</b>				
2.1	Blood Cells — Fresh mount and stained	5	Demonstration	Specimen slides.
2.2	Differential Count	5	Demonstration	Specimen slides.
<b>UNIT -3 RBC &amp; WBC COUNT</b>				
3.1	RBC count	5	Lecture cum demonstration	Neubauer's counting chamber Essential chemicals & glassware s
3.2	WBC count	5	Lecture cum demonstration	Neubauer's counting chamber

				Essential chemicals & glasswares
<b>UNIT 4 HAEMOGLOBIN ANALYSIS &amp; BLOOD GROUPING</b>				
4.1	Determination of haemoglobin — Sahli's Method	5	Lecture cum demonstration	Essential chemicals & glasswares
4.2	Blood grouping	5	Lecture cum demonstration	Blood grouping kit
<b>UNIT 5 BLOOD COAGULATION &amp; BLOOD PRESSURE</b>				
5.1	Estimating the Clotting, bleeding time; ESR rate	5	Lecture cum demonstration	Glass wares
5.2	Recording pulse rate and measurement of blood pressure.	2	Lecture cum demonstration	Glass wares
5.3	Interpretation of blood examination reports	3	Lecture	Laboratory report

**EVALUATION PATTERN**

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test - 1**C2** – Internal Test - 2**C3** – Model Practical Exam**C4** – Record**C5** – Non- Scholastic



## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Identify the various tissues of the body	K1	PSO1
CO 2	Illustrate and describe the blood cells	K1, K2,	PSO1
CO 3	Determine the hemoglobin level and blood pressure	K1 & K3	PSO1
CO 4	Determine clotting time, bleeding time and blood grouping	K1, K3	PSO1
CO 5	Interpret the biochemical lab reports	K2 & K4	PSO1

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	3	2	1	1	1	1	1	1	1	1	1	1
CO2	2	3	1	1	1	1	1	1	1	1	1	1
CO3	3	2	1	1	1	1	1	1	1	1	1	1
CO4	2	2	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	

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<b>CO1</b>	1	1	1	1	2	1	1	1	1	1	1	
<b>CO2</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO3</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO4</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO5</b>	1	3	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

<b>CO/ PSO</b>	<b>P01</b>	<b>P02</b>	<b>P03</b>	<b>P04</b>
<b>CO1</b>	3	3	1	1
<b>CO2</b>	3	2	1	1
<b>CO3</b>	1	1	1	1
<b>CO4</b>	1	3	1	3
<b>CO5</b>	2	2	1	3

**Note: Strongly Correlated – 3, Moderately Correlated – 2**

**Weakly Correlated -1**

**COURSE DESIGNERS:**

- Staff Name: Dr. Vasantha Esther Rani**
- Staff Name: Mrs. C. Helen**

**Forwarded By**



**(Dr. Vasantha Esther Rani)**

**I B.Sc. HOME SCIENCE WITH FOOD BIO TECHNOLOGY**  
**SEMESTER –I**

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UG-UAHS	19NINME	BASICS OF NUTRITION	Lecture	2	2

**COURSE DESCRIPTION**

This course helps to understand the basic concepts on health, nutrition and deficiency diseases of various nutrients

**COURSE OBJECTIVES**

- Understand the components of health, nutrition and deficiency diseases of various nutrients
- To gain knowledge on various cooking methods

**UNITS**

**UNIT –I NUTRITION AND HEALTH**

**(6 HRS.)**

Definition – Health, Nutrition, Malnutrition, Adequate Nutrition, Balanced Diet, Nutritional status, Definition of Fitness, Components of Fitness, Types of physical activity and their energy consumption level.

**UNIT –II FOOD**

**(6 HRS.)**

Definition of Food, Functions, Food groups and their Nutrient contribution (Basic 5), Food pyramid, Definition of Nutrient, Classification.

**UNIT –III MACRO- NUTRIENTS AND HEALTH (6 HRS.)**

Definition, Functions, Deficiency diseases and their important signs and symptoms, Food sources of carbohydrate, protein and fat.

**UNIT –IV MICRO-NUTRIENTS AND HEALTH (6 HRS.)**

Definition, Functions, Deficiency diseases and their important signs and symptoms, Food sources of vitamin A, D, E, K, B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, B<sub>6</sub>, B<sub>12</sub>, C and folic acid. Minerals – Ca, P, I, Zn, Na, Fl.

**UNIT –V COOKING AND HEALTH (6 HRS.)**

Definition, Glossary and Preliminary preparation and cooking methods – Merits and Demerits, Conservation of nutrients.

**REFERENCES:****TEXT BOOKS**

1. Srilakshmi.B.(2010). *Food Science*, New age International Pvt.Ltd., New Delhi.
2. Swaminathan. M (2010), *Handbook of Food and Nutrition*, The Bangalore Press, Bangalore.

**REFERENCE BOOKS:**

2. Benion Marion (1980). *Introductory foods*, Macmillan, New York,
3. Gitanjali Chatterjee, ,(1999) *Handbook of Nutrition*, Rajat Publications.
4. Anjana Agarwal, Shobha A Udipi (2014) *Text book of Human Nutrition*, Jaypee Brothers Medical Publishers.

**OPEN EDUCATIONAL REFERENCES:**

1. <http://www.hanoverhornets.org/pe/wp-content/uploads/2017/01/nutritionnotes-2.pdf>
2. <https://school.eckovation.com/short-notes-nutrition/>
3. <https://ncert.nic.in/textbook/pdf/iehp104.pdf>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 NUTRITION AND HEALTH</b>		<b>(12 HRS.)</b>		
1.1	Definition – Health, Nutrition, Malnutrition, Adequate Nutrition	1	Chalk & Talk	Black Board

1.2	Balanced Diet, Nutritional status	1	Lecture	PPT
1.3	Definition of Fitness, Components of Fitness	2	Lecture	PPT
1.4	Types of physical activity and their energy consumption level	2	Lecture	Videos
<b>UNIT -2 FOOD (12 HRS.)</b>				
2.1	Definition of Food, Functions	2	Chalk & Talk	Black Board
2.2	Food groups and their Nutrient contribution (Basic 5)	2	Lecture	PPT
2.3	Food pyramid, Definition of Nutrient, Classification	2	Lecture	PPT
<b>UNIT -3 MACRO NUTRIENTS AND HEALTH(12 HRS.)</b>				
3.1	Carbohydrate- Definition, Functions, sources, deficiency diseases and their signs& symptoms	2	Lecture	PPT
3.2	Protein- Definition, Functions, sources, deficiency diseases and their signs& symptoms	2	Lecture	PPT
3.3	Fat-Definition, Functions, sources, deficiency diseases and their signs& symptoms	2	Lecture	PPT
<b>UNIT -4 MICRO NUTRIENTS AND HEALTH</b>				
4.1	Vitamin A, D, E, K - Definition, Functions, sources, Deficiency	2	Chalk & Talk	Black Board

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	diseases, signs & symptoms			
4.2	Vitamin B <sub>1</sub> , B <sub>2</sub> , B <sub>3</sub> , B <sub>6</sub> , B <sub>12</sub> , C and folic acid - Definition, Functions, sources, Deficiency diseases, signs & symptoms	2	Lecture	PPT
4.3	Minerals – Ca, P, I, Zn, Na, Fl - Definition, Functions, sources, Deficiency diseases, signs & symptoms	2	Chalk & Talk	Black Board
<b>UNIT -5 COOKING AND HEALTH</b>				
5.1	Cooking- Definition, Glossary and Preliminary preparation	2	Chalk & Talk	Black Board
5.2	Cooking methods – Merits and Demerits	2	Lecture	PPT
5.3	Conservation of nutrients	2	Demonstration	PPT

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
<b>K1</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>4</b>

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<b>K2</b>	2	2	5	-	-	9	-	9
<b>K3</b>	3	3	-	-	5	11	-	11
<b>K4</b>	3	3	-	5	-	11	-	11
<b>Non Scholastic</b>	-	-	-	-	-		5	5
<b>Total</b>	10	10	5	5	5	35	5	40

<b>CIA</b>	
<b>Scholastic</b>	<b>35</b>
<b>Non Scholastic</b>	<b>5</b>
	<b>40</b>

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

### EVALUATION PATTERN

<b>SCHOLASTIC</b>	<b>NON - SCHOLASTIC</b>	<b>MARKS</b>
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<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>CIA</b>	<b>ESE</b>	<b>Total</b>
<b>10</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>40</b>	<b>60</b>	<b>100</b>

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non - Scholastic

## **COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

<b>NO.</b>	<b>COURSE OUTCOMES</b>	<b>KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)</b>	<b>PSOs ADDRESSED</b>
CO 1	Define the terminologies related to nutrition and health	K1	PSO3
CO 2	Describe the functions of food, food groups and food guide pyramid	K2	PSO3
CO 3	Identify the symptoms of deficiency disease of nutrients	K1 & K3	PSO3
CO 4	Classify micro nutrients and identify the impact on health	K2	PSO3
CO 5	Choose the appropriate cooking methods to conserve the nutrients	K3	PSO3



**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	3	1	1	1	1	1	1	1	1	1
CO2	1	1	3	1	1	1	1	1	1	1	1	1
CO3	1	1	3	1	1	1	1	1	1	1	1	1
CO4	1	1	3	1	1	1	1	1	1	1	1	1
CO5	1	1	3	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	2	2	2	2
CO2	2	2	2	2
CO3	2	2	2	2
CO4	2	2	2	2
CO5	1	1	1	1

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2

♦ Weakly Correlated -1

**COURSE DESIGNER:**

**Staff Name: Mrs.C.Helen**

**Forwarded By**



(Dr.Vasantha Esther Rani)

**I B.Sc. HOME SCIENCE WITH FOODBIOTECHNOLOGY  
SEMESTER –I**

*For those who joined in 2021 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/ WEEK	CREDITS
UAHS	21UG1SLN	Nutrition For Health & Fitness	Self Learning	-	2

**COURSE DESCRIPTION**

To integrate and apply the principles of nutrition to evaluate physical fitness and dietary pattern and their interrelationship.

**COURSE OBJECTIVES**

- Understand the components of health and fitness and the importance of nutrition in maintaining health
- Make nutritional, dietary and physical activity recommendations to achieve fitness and wellbeing.

**UNITS**

**UNIT –I INTRODUCTION TO NUTRITION**

Nutrition – definition, nutritional status, nutrients and their function, relationship of food and

health – Characteristics of good nutrition – balanced diet – BMI, IBW, Dietary guidelines-basic food groups, food pyramid

## **UNIT –II INTRODUCTION TO PHYSICAL FITNESS**

Introduction to fitness and health; Definition and Components of fitness; Classification of physical activity based on energy expenditure; Assessment of nutritional status

## **UNIT –III MACRO& MICRO NUTRIENTS**

Carbohydrates, Protein & Lipids – Sources, Classification, functions, digestion & absorption. Vitamins– sources, Classification, Functions, & deficiency disorders of Vitamins. Brief account on Minerals.

## **UNIT IV: BALANCED DIET**

Planning of balanced diet - Infants Nutrition - supplementary foods – Nutrition of Pre-school children, School children and Adolescence. Nutrition and food requirements of an expectant mother, Lactating women& elderly people.

## **UNIT –V HOLISTIC APPROACH TO FITNESS AND HEALTH**

Significance of physical fitness and nutrition in the management of Obesity and Underweight.

### **REFERENCES:**

1. Gupta L. C. &. Kusium Gupta (1989). *Foods mid Nutrition, Facts and Figures*, Jayapahothas, New Delhi,
2. Swaminathan M. (1988) *Advanced textbook of Food and Nutrition*, Vol. I and II, the Bangalore Printing and Publishing Co., Ltd.
3. Gitanjali Chatterjee, ,(1999) *Handbook of Nutrition*, Rajat Publications.
4. Srilakshmi. B.(2007). *Food Science*, New age International Pvt.Ltd.,NewDelhi.

### **OPEN EDUCATIONAL REFERENCES :**

1. [https://en.wikibooks.org/wiki/Fundamentals\\_of\\_Human\\_Nutrition](https://en.wikibooks.org/wiki/Fundamentals_of_Human_Nutrition)
2. <http://www.hanoverhornets.org/pe/wp-content/uploads/2017/01/nutritionnotes-2.pdf>
3. <http://pressbooks.oer.hawaii.edu/humannutrition/>

### **COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 HOLISTIC APPROACH TO FITNESS AND HEALTH</b>				
1.1	Introduction to fitness and health	3	Chalk & Talk	Black Board.
1.2	Classification of physical activity based on energy expenditure	4	Chalk & Talk	LCD
1.3	Assessment of nutritional status-Direct Methods	4	Lecture	Black Board,PPT
1.4	Assessment of nutritional status-Indirect Method	4	Lecture	White board PPT
<b>UNIT -2 ENERGY SYSTEMS</b>				
2.1	Aerobic and anaerobic energy system	4	Lecture	Black Board Charts
2.2	Energy input and output	3	Chalk & Talk	Black Board
2.3	Shifts in Carbohydrate and Fat metabolism	4	Lecture	Black Board
2.4	Mobilization of fat stores during exercise	4	Lecture	PPT
<b>UNIT -3 CASE STUDIES AND DIET MODIFICATIONS</b>				
3.1	Fuels and nutrients to support physical activity	1	PPT	LCD
3.2	Diet manipulation	2	Chalk & Talk	Black Board
3.3	Pre and Post game meals	2	Lecture	Black Board
3.4	Water and electrolyte	2	Lecture	LCD

	balance			
3.5	Losses and their replenishments during exercise and sports events	2	Lecture	PPT
3.6	Carbohydrate Loading	3	Lecture	PPT
3.7	Effect of dehydration	1	Lecture	PPT
3.8	Ergogenic aids and Sports Drinks	2	Lecture	PPT
<b>UNIT - 4 PHYSICAL FITNESS AND HEALTH INTER-RELATIONSHIPS</b>				
4.1	Significance of physical fitness and nutrition in the prevention and management of weight Obesity	2	Lecture	Black Board
4.2	Significance of physical fitness and nutrition in the prevention and management of Diabetes Mellitus	2	Chalk & Talk	Green Board
4.3	Significance of physical fitness and nutrition in the prevention and management of Cardio Vascular Diseases	2	Discussion	Black Board
4.4	Significance of physical fitness and nutrition in the prevention and management of Disorders of bone health	3	Lecture	LCD
4.5	Significance of physical fitness and nutrition in the prevention and management of cancer	3	Lecture	PPT
4.6	Sports anemia, Female Athlete Triad	3	Lecture	PPT
<b>UNIT-5 ALTERNATIVE SYSTEMS OF HEAL WAND FITNESS</b>				

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5.1	Yoga	3	Lecture	Video
5.2	Meditation	4	Chalk & Talk	PPT.
5.3	Vegetarianism	4	Discussion	Black Board
5.4	Herbal Medicines	4	Lecture	LCD

Levels	C1	C2	C3	C4	Total Scholastic Marks	Non Scholastic Marks C5	CIA Total	% of Assessment
	Session-wise Average	Better of W1, W2	M1+M2	MID - SEM TEST				
	5 Mks.	5 Mks	5+5=10 Mks.	15 Mks	35 Mks.	5 Mks.	40Mks.	
K1	5	-	-	2 ½	7.5	-	7.5	18.75 %
K2	-	5	4	2 ½	11.5	-	11.5	28.75 %
K3	-	-	3	5	8	-	8	20 %
K4	-	-	3	5	8	-	8	20 %
Non Scholastic	-	-	-	-		5	5	12.5 %
Total	5	5	10	15	35	5	40	100 %

CIA	
Scholastic	35
Non Scholastic	5
	40

- **All the course outcomes are to be assessed in the various CIA components.**
- **The levels of CIA Assessment based on Revised Bloom's Taxonomy for I UG are :**  
**K1- Remember, K2-Understand, K3-Apply, K4-Analyse**
- **The I UG course teachers are requested to start conducting S1, W1, M1, in due intervals of time.**

### EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
5	10	15	5	5	40	60	100

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Recall the relationship of food and health.	K1	PSO3, PSO4
CO 2	Describe terminologies related to fitness.	K1, K2,	PSO3 & PSO4
CO 3	Identify the different macro and micro nutrients.	K1 & K3	PSO3 & PSO4
CO 4	Plan the balanced diet for different age groups.	K1, K2, K3 & K4	PSO3 & PSO4
CO 5	Examine the holistic approach to fitness and health.	K2 & K4	PSO3 & PSO4

### Mapping of COs with PSOs

CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1			3	2								
CO2			3	2								
CO3			3	2								
CO4			3	2								
CO5			3	2								
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1									3			
CO2												
CO3												
CO4												
CO5												

**Mapping of COs with POs**

CO/ PO	PO1	PO2	PO3	PO4	PO5
CO1	3		2	2	2
CO2	3		2	2	2
CO3	3		2	2	2
CO4	3		2	2	2
CO5	3		2	2	2

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2      ♦ Weakly Correlated -1

**COURSE DESIGNER:**

1. Dr.Sr.Biji Cyriac

2. Mrs. D.Mouna

**Forwarded By**



**HOD'S  
Signature**



**I B.Sc.Home Science with Food Biotechnology**  
**SEMESTER –II**

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N2CC4	HUMAN NUTRITION	Lecture	5	4

**COURSE DESCRIPTION**

The course offers the classification, metabolism, functions and deficiency disorders of macro and micronutrients.

**COURSE OBJECTIVES**

- To enable the students to gain knowledge of nutrients, their metabolism and functions.
- To adapt the knowledge gained to modify their daily meal pattern.
- To understand the terminologies related to antioxidants, nutrigenetics and nutrigenomics.

**UNITS**

**UNIT –I ENERGY**

**(15 HRS.)**

Energy - Determination of energy content of foods, physiological fuel value, gross energy value, Thermic effects of foods, basal metabolic rate, factors influencing BMR, determination of energy requirements in man – Human

Respiration Calorimeter. **Self-study: Sources and requirements.**

### **UNIT –I**

**(15 HRS.)**

Carbohydrates - Classification, functions, digestion, absorption, metabolism.  
Proteins - Classification, functions, digestion and metabolism, essential amino acids, deficiency –, sources.

Lipids – Classification, functions, digestion, absorption, essential fatty acids, functions, effects of deficiency, sources.

**Self-study: Protein Energy Malnutrition, Sources and Requirements of Carbohydrates, Proteins & Lipids.**

### **UNIT –III MICRONUTRIENTS**

**(15 HRS.)**

Minerals – their role in nutrition, functions, requirements, sources, deficiency – Calcium, phosphorous, sodium, potassium, copper, iron, iodine, fluorine, zinc.

Vitamins - their role in nutrition, functions, requirements, sources, deficiency – Fat soluble vitamins – A,D,E,K, water soluble vitamins - thiamine, niacin, riboflavin, folic acid, ascorbic acid.

**Self-Study: vitamin B<sub>6</sub>, vitamin B<sub>12</sub>.**

### **UNIT –IV WATER AND FIBRE (12 HRS.)**

Water: Functions, requirements, sources, balance, dehydration and rehydration.

Fibre: Functions, clinical role in human nutrition,

**Self-Study: sources and requirements.**

### **UNIT –V ANTIOXIDANTS AND NUTRIGENOMICS**

**(15 HRS.)**

Antioxidants – Sources and effects of free radicals, Antioxidant defense systems, Antioxidant & diseases, Sources of antioxidants.

Nutrigenomics- Basics of Nutrigenomics- Tools of Nutrigenomics- Chronic Disease and Nutritional Genomics.

### **REFERENCES:**

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#### **TEXT BOOKS**

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1. B. Srilakshmi (2016). *Nutrition Science*” New Age International Publishers.

#### **REFERENCE BOOKS:**

1. Anita F.P. (1989). *Chemical Nutrition Dietetics*, Oxford University Press.
2. Gulthrie .A (1979). *Introductory Nutrition*, The AVI. Mospy Company.
3. Passmore R. Eastinood M.A. (1986). *Human Nutrition and Dietetics*, Longman Group Ltd.

4. Robinsion C.H., Lawler M.R. (1990). *Normal and Therapeutic Nutrition*, Oxford and IBH Publisher
5. Swaminathan.M (1988). *Advanced trend took on Food and Nutrition*, Vol I and Vol II, The Bangalore Printing and Publishing Co. Ltd.

**OPEN EDUCATIONAL REFERENCES:**

[https://en.wikibooks.org/wiki/Fundamentals\\_of\\_Human\\_Nutrition](https://en.wikibooks.org/wiki/Fundamentals_of_Human_Nutrition)  
<http://pressbooks.oer.hawaii.edu/humannutrition/>  
<https://www.youtube.com/watch?v=sorIaN6vRBI>  
<http://pressbooks.oer.hawaii.edu/humannutrition2/>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 ENERGY</b>				
1.1	Energy - Determination of energy content of foods	3	Chalk &Talk,Lecture, Demonstration	Black/white Board, Instrument
1.2	Physiological fuel value, gross energy value, Thermic effects of foods	3	Chalk & Talk, Lecture	Black/white Board
1.3	BMR	3	Chalk & Talk Lecture	PPT &Black/White board
1.4	Determination of energy requirements in man – Human Respiration	3	Chalk & Talk Lecture	PPT & White board

	Calorimeter			
<b>UNIT -2 MACRONUTRIENTS</b>				
2.1	Carbohydrates - Classification, functions, digestion, absorption, metabolism	4	Chalk & Talk Lecture	Black/White board
2.2	Proteins - Classification, functions, digestion and metabolism, essential amino acids, deficiency, sources	3	Chalk & Talk, Lecture	Black/white Board
2.3	Lipids – Classification, functions, digestion, absorption	3	Chalk & Talk, Lecture	Black/white Board
2.4	Essential fatty acids, functions, effects of deficiency, sources.	2	Chalk & Talk, Lecture	Black/white Board
<b>UNIT -3 MICRONUTRIENTS</b>				
3.1	Calcium, phosphorous, sodium, potassium, copper	3	Chalk & Talk, Lecture	Black/white Board,PPT
3.2	Iron, Iodine, fluorine, zinc	2	Chalk & Talk, Lecture	Black/white Board,PPT
3.3	Fat soluble vitamins	3	Chalk & Talk, Lecture	Black/white Board,PPT
3.4	Water soluble vitamins	4	Chalk & Talk, Lecture	Black/white Board,PPT

<b>UNIT -4 WATER AND FIBRE</b>				
4.1	Water: Functions, requirements, sources	3	Chalk & Talk, Lecture, Discussion	Black/white Board, PPT
4.2	Water balance, dehydration and rehydration.	3	Chalk & Talk, Lecture, Discussion	Black/white Board, PPT
4.3	Fibre: classification, Functions	3	Chalk & Talk, Lecture	Black/white Board
4.4	Clinical role in human nutrition	3	Chalk & Talk, Lecture	Black/white Board
<b>UNIT -5 ANTIOXIDANTS AND NUTRIGENOMICS</b>				
5.1	Antioxidants – Sources and effects of free radicals, Antioxidant defense systems	3	Chalk & Talk, Lecture, Exhibits	Black/white Board, PPT, samples available in the market
5.2	Antioxidant & diseases, Sources of antioxidants	3	Chalk & Talk, Lecture, Discussion	Black/white Board, PPT
5.3	Basics of Nutrigenomics- Tools of Nutrigenomics	3	Chalk & Talk, Lecture, Discussion	Black/white Board, PPT
5.4	Chronic Diseases and Nutritional Genomics	3	Chalk & Talk, Lecture, Discussion	Black/white Board, PPT

evels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
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	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non-Scholastic	5
<b>TOTAL</b>	<b>40</b>

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

**K1**- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

### EVALUATION PATTERN

SCHOLASTIC	NON -	MARKS
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					SCHOLASTIC			
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non - Scholastic

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Define the units and concepts of energy	K1	PSO3& PSO4
CO 2	Classify and explain the macro nutrients	K2	PSO3, PSO4 & PSO22
CO 3	Describe the nutrients with respect to the excess, deficiency and RDA for each micro nutrient.	K2	PSO3,PSO4 & PSO23
CO 4	Identify the non-nutrients – water and dietary fibre.	K3	PSO3& PSO4

CO 5	Examine the antioxidants, nutrigenetics and nutrigenomics	K4	PSO3, PSO4 & PSO5
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### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	3	2	1	1	1	1	1	1	1	1
CO2	1	1	3	2	1	1	1	1	1	1	1	1
CO3	1	1	3	2	1	1	1	1	1	1	1	1
CO4	1	1	3	2	1	1	1	1	1	1	1	1
CO5	1	1	3	2	2	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	3	1	
CO3	1	1	1	1	1	1	1	1	1	1	3	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

### Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4
CO1	3	1	1	3
CO2	3	1	1	3
CO3	3	1	1	3



<b>CO4</b>	3	1	1	3
<b>CO5</b>	3	1	1	3

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

**COURSE DESIGNER:****1.Dr.Vasantha Esther Rani****2.Ms.P.MagdaleneVirjini****Forwarded By**


(Dr.Vasantha Esther Rani)

**I B.Sc.Home Science with Food Biotechnology**  
**SEMESTER –II**

*For those who joined in 2019 onwards*

<b>PROGRAMME CODE</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CATEGORY</b>	<b>HRS/WEEK</b>	<b>CREDITS</b>
<b>UG-UAHS</b>	<b>19N2CC5</b>	<b>FOOD SCIENCE</b>	<b>Lecture</b>	<b>4</b>	<b>3</b>

**COURSE DESCRIPTION:**

The course emphasizes on the composition of foods and the changes that occur during processing.

**COURSE OBJECTIVES:**

- Gain knowledge on the nutritive value of different foods and understand the classification of foods.
- Develop skills to prepare acceptable foods with regards to appearance palatability and nutritive value

**UNITS**

## **UNIT –I BASIC CONCEPTS AND RECENT TRENDS IN FOOD SCIENCE**

**(12 HRS.)**

Concept of Food Science – definition of foods and food science; classification of foods. Food groups and their nutrient contribution – Basic 5 (ICMR). Methods of cooking – merits and demerits of moist heat methods and dry heat methods. Recent trends in food science – genetically modified foods & Nutraceuticals.functions and

**Self- Study: Solar cooking and microwave cooking**

## **UNIT –II CEREALS, PULSES, FRUITS & VEGETABLES**

**(12 HRS.)**

Structure, Nutritive value, changes during preparation

- a) Cereals – structure of cereal grains, their nutritive value, milling and parboiling of cereals and its advantages, enrichment and fortification of cereals.
- b) Pulses - Their nutritive value, importance of vegetarian diets. Improvement of the protein pulses, toxic constituents, values of germinated pulses.
- c) Fruits and vegetables - Classification, nutritive value, pigments, importance in the diet. Conservation of nutrients during preparation and cooking.

## **UNIT –III MEAT, POULTRY & FISH**

**(12 HRS.)**

Flesh foods – Meat, Poultry, Fish - Composition, nutritive value and its role in cookery

## **UNIT –IV EGG, MILK & MILK PRODUCTS**

**(12 HRS.)**

- a) Eggs - Structure and nutritive value – Role of egg in cookery; Factors affecting coagulation and foam formation; Testing freshness in egg.
- b) Milk and milk products: Nutritive value, different types of milk and its products.

## **UNIT –V SPICES, CONDIMENTS, NUTS, OILSEEDS & BEVERAGES**

**(12 HRS.)**

- a) Spices and condiments – use and abuses
- b) Nuts and oilseeds –their nutritive value and importance of the diet; Toxins in nuts and oilseeds.

**C)Self -study: Beverages– Classification and its role in daily diet.**

### **REFERENCES:**

### **TEXTBOOK:**

1. Srilakshmi.B (2018). *Food Science*, New age International Pvt.Ltd, NewDelhi.

### **REFERENCE BOOKS:**

1. Avantina Sharma (2010). *Food Science and Technology*, International Book Distributing Company.

2. Benion Marion (1980). *Introductory foods*, Macmillan, New York.
3. Fox B.A., Cameron A.G.(1982) *Food Science a Chemical Approach* Hodden and Stoughton Ltd., Great Britain.
4. Peckham G.C (1978) *Foundations of Food preparation* Macmillan Co, New York.
5. Potter N.N.(2007) *Food Science*, The AVI Publishing Company INC, USA
6. Shankuntala O.Manay (2005). *Food: Facts and Principles*, New age International Pvt.Ltd, New Delhi.

**OPEN EDUCATIONAL RESOURCES:**

<http://www.nin.res.in>

<http://www.cftri.res.in>

<http://www.iifpt.edu.in>

<http://www.afsti.org>

<http://www.icfost.org>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 BASIC CONCEPTS AND RECENT TRENDS IN FOOD SCIENCE</b>				
1.1	Concept of Food Science – definition of foods and food science; functions and classification of foods.	2	Chalk & Talk	Black Board
1.2	Food groups and their nutrient contribution – Basic 5 (ICMR).	2	Chalk & Talk	Black Board
1.3	Methods of cooking – merits and demerits of	4	Lecture	PPT

	moist heat methods and dry heat methods			
1.4	Solar and microwave cooking.	2	Discussion	Videos
1.5	Recent trends in food science – genetically modified foods & Nutraceuticals.	2	Lecture	Videos
<b>UNIT -2 CEREALS, PULSES, FRUITS &amp; VEGETABLES</b>				
2.1	Cereals – structure of cereal grains, their nutritive value	2	Chalk & Talk	Black Board
2.2	Milling and parboiling of cereals and its advantages, enrichment and fortification of cereals	1	Lecture	PPT
2.3	Pulses - Their nutritive value, importance of vegetarian diets. Improvement of the protein pulses	3	Chalk & Talk	Black Board
2.4	Toxic constituents, values of germinated pulses	2	Lecture	Smart Board
2.5	Fruits and vegetables - Classification, nutritive value, pigments	2	Lecture	Videos
2.6	Importance of fruits and vegetables in the diet. Conservation of nutrients during preparation and cooking	2	Demonstration	Fruits, vegetables, needed apparatus

<b>UNIT -3 MEAT, POULTRY &amp; FISH</b>				
3.1	Meat - Composition, nutritive value and its role in cookery	4	Lecture	PPT
3.2	Poultry, Fish - Composition, nutritive value and its role in cookery	4	Lecture	PPT
3.3	Fish - Composition, nutritive value and its role in cookery	4	Lecture	PPT
<b>UNIT -4 EGG, MILK &amp; MILK PRODUCTS</b>				
4.1	Eggs - Structure and nutritive value – Role of egg in cookery	5	Chalk & Talk	Black Board
4.2	Milk and milk products: Nutritive value	4	Chalk & Talk	Black Board
4.3	Different types of milk and its products	3	Lecture	PPT
<b>UNIT -5 SPICES, CONDIMENTS, NUTS, OILSEEDS &amp; BEVERAGES</b>				
5.1	Spices and condiments – use and abuses	5	Lecture	PPT
5.2	Nuts and oilseeds –their nutritive value and importance of the diet	4	Chalk & Talk	Black Board
5.3	Beverages– Classification and its role in daily diet.	3	Discussion	Videos

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks	CIA Total
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CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

							C6	
	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5
	40

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

**EVALUATION PATTERN**

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1**C2** – Internal Test-2**C3** - Quiz**C4** – Assignment**C5** - OBT/PPT**C6** – Non – Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Define the basic concept and recent trends in food science and nutrition	K1	PSO3
CO 2	Classify the cooking methods	K2	PSO3

CO 3	Describe the composition of food groups	K1, K2	PSO3
CO 4	Choose the suitable cooking methods for various food groups	K1, K3	PSO3
CO 5	Identify the role of foods in Indian cookery	K1, K3	PSO3

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	3	1	
CO3	1	1	1	1	1	1	1	1	1	1	3	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

### Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4
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CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

<b>CO1</b>	3	1	1	3
<b>CO2</b>	1	1	1	1
<b>CO3</b>	3	1	1	3
<b>CO4</b>	1	1	1	1
<b>CO5</b>	1	1	1	1

**Note:**   ♦ Strongly Correlated – 3                ♦ Moderately Correlated – 2  
                  ♦ Weakly Correlated -1

**COURSE DESIGNER:**

**1. Mrs.C.Helen**

**Forwarded By**



(Dr.Vasantha Esther Rani)

**I.B.Sc.Home Science with Food Biotechnology**

**SEMESTER –II**

*For those who joined in 2019 onwards*

<b>PROGRAMME CODE</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CATEGORY</b>	<b>HRS/WEEK</b>	<b>CREDITS</b>
<b>UG-UAHS</b>	<b>19N2CC6</b>	<b>FOOD SCIENCE AND NUTRITION LAB</b>	<b>Practical</b>	<b>3</b>	<b>2</b>

**COURSE DESCRIPTION**

This course provides culinary knowledge and imparts practical skills in food preparations.

### **COURSE OBJECTIVES**

- To learn basic safety and sanitation practices related to food preparation.
- To practice accurate measuring techniques of the ingredients.
- To apply appropriate food preparation techniques in preparing recipes from different food groups.
- To identify and estimate sugars, protein and minerals in food samples.

### **UNITS**

#### **UNIT –I EXPERIMENTAL COOKERY AND PREPARATION OF RECIPES (10 HRS.)**

- Cereal cookery – Gelatinization, Dextrinization, cooking methods of rice, recipe preparations.
- Pulse cookery – Factors affecting cooking quality, recipe preparations.
- Vegetable cookery – Effect of cooking on pigments- Chlorophyll and Carotenoids, recipe preparations
- Fruit cookery – Factors affecting enzymatic browning, recipe preparations
- Milk & Egg cookery – Factors affecting cooking quality of egg, recipe preparations
- Fleshy foods cookery - recipe preparations

#### **UNIT –II QUALITATIVE ANALYSIS OF MONOSACCHARIDE (10 HRS.)**

Monosaccharide - Glucose, Fructose, Galactose

#### **UNIT –III QUALITATIVE ANALYSIS OF DISACCHARIDES (10 HRS.)**

Disaccharide - Sucrose, Lactose and Maltose

#### **UNIT –IV QUALITATIVE ANALYSIS OF NUTRIENTS (5 HRS.)**

- Protein
- Minerals

#### **UNIT –V QUANTITATIVE ANALYSIS OF NUTRIENTS (10 HRS.)**

- Reducing sugar
- Vitamin C

### **REFERENCES:**

1. Thangam E. Philip (1995). *Modern Cookery*, Orient Longmans Limited, New Delhi.
2. Benion Marion (1980). *Introductory foods*, Macmillan, New York.

3. Fox B.A., Cameron A.G. (1982) *Food Science a Chemical Approach* Hodden and Stoughton Ltd., Great Britain.
4. Peckham G.C (1978) *Foundations of Food preparation* Macmillan Co, New York.

**OPEN EDUCATIONAL RESOURCES:**

1. <http://www.nin.res.in>
2. <http://www.cftri.res.in>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 EXPERIMENTAL COOKERY AND PREPARATION OF RECIPES</b>				
1.1	Cereal cookery – Gelatinization, Dextrinization, cooking methods of rice, recipe preparations	2	Experimental cooking	Required ingredients and equipment
1.2	Pulse cookery – Factors affecting cooking quality, recipe preparations.	2	Experimental cooking	Required ingredients and equipment
1.3	Vegetable cookery – Effect of cooking on pigments- Chlorophyll and Carotenoids, recipe preparations	2	Experimental cooking	Required ingredients and equipment
1.4	Fruit cookery – Factors affecting enzymatic browning, recipe preparations	2	Experimental cooking	Required ingredients and equipment
1.5	Milk & Egg cookery – Factors affecting cooking quality of egg, recipe preparations Fleshy foods cookery -	2	Experimental cooking	Required ingredients and equipment

	recipe preparations			
<b>UNIT -2 QUALITATIVE ANALYSIS OF MONOSACCHARIDE</b>				
2.1	Glucose	4	Lecture cum demonstration	Required chemicals and glasswares
2.2	Fructose	3	Lecture cum demonstration	Required chemicals and glasswares
2.3	Galactose	3	Lecture cum demonstration	Required chemicals and glasswares
<b>UNIT -3 QUALITATIVE ANALYSIS OF DISACCHARIDES</b>				
3.1	Sucrose	4	Lecture cum demonstration	Required chemicals and glass wares
3.2	Lactose	3	Lecture cum demonstration	Required chemicals and glass wares
3.3	Maltose	3	Lecture cum demonstration	Required chemicals and glass wares
<b>UNIT -4 QUALITATIVE ANALYSIS OF NUTRIENTS</b>				
4.1	Protein	3	Lecture cum demonstration	Required chemicals and glass wares
4.2	Minerals	2	Lecture cum demonstration	Required chemicals and

				glass wares
<b>UNIT -5 QUANTITATIVE ANALYSIS OF NUTRIENTS</b>				
5.1	Reducing sugar	5	Lecture cum demonstration	Required chemicals and glass wares
5.2	Vitamin C	5	Lecture cum demonstration	Required chemicals and glass wares

**EVALUATION PATTERN**

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test - 1**C2** – Internal Test - 2**C3**– Model Practical Exam**C4** – Record**C5** – Non- Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
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CO 1	Recall the principles of various cooking methods.	K1	PSO3
CO 2	Classify edible and non-edible portions of food stuffs	K2	PSO3
CO 3	Plan the preparation of recipes based on different food groups	K3, K4	PSO3
CO 4	Distinguish the factors affecting the food components during cooking process	K4	PSO3
CO 5	Identify sugars, protein and minerals present in food samples	K1, K3	PSO3
CO6	Explain the quantitative analysis of reducing sugar and ascorbic acid	K2, K3	PSO3

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1`	1	1	1	1	1	1	1	1	3	1	
CO3	1	1	1	1	1	1	1	1	1	1	3	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1`	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	3	1	1	3
CO2	1	1	1	1
CO3	3	1	1	3
CO4	1	1	1	1
CO5	1	1	1	1

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

**COURSE DESIGNER:**

1. Mrs.C.Helen

**Forwarded By**



(Dr.Vasantha Esther Rani)

**SELF LEARNING INTERDISCIPLINARY COURSE****SEMESTER –II**

*(For those who joined in 2021 onwards)*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	21UG2SLS	BASICS OF PSYCHOLOGY	SELF LEARNING	-	2

**COURSE DESCRIPTION**

To introduce students to the basic concepts of the field of psychology with an emphasis on applications of psychology in everyday life.

## **COURSE OBJECTIVES**

To impart knowledge among learners to analyse their own self and equip them with sense of adjustment.

To help the learners to understand the importance of Socialization

## **UNITS**

### **UNIT -I INTRODUCTION TO PSYCHOLOGY ( HRS.)**

Psychology – Meaning – Definition – Branches of Psychology: Developmental Psychology – Social Psychology – Abnormal Psychology – Behavioural Psychology – Clinical Psychology – Forensic Psychology – Social Psychology.

### **UNIT -II METHODS OF PSYCHOLOGY ( HRS.)**

Observational Method – Experimental Method – Clinical Case Study Method – Interview Method.

### **UNIT -III MEASUREMENT OF INTELLIGENCE ( HRS.)**

Definition – Effect of Heredity and Environment on Intelligence – Assessment of Intelligence – Individual Verbal Tests – Individual Non-Verbal Tests – Individual Performance Tests – Group Verbal Tests – Group Non- Verbal Tests – Concept of Mental Age and IQ.

### **UNIT -IV ESSENTIALS OF LEARNING ( HRS.)**

Meaning and Nature – Types of Learning – Verbal Learning – Motor Learning – Concept Learning – Problem Solving Learning – Concept of Classical Conditioning – Operant Conditioning – Insightful Learning and Observational Learning.

### **UNIT -V MOTIVATIONAL ASPECTS OF BEHAVIOUR ( HRS.)**

Motivation – Meaning – Needs – Meaning and Types – Drives – Incentives- Motives: Hunger Motive Thirst Motive – Sex Motive – Maternal Motive – Aggressive Motive and Achievement Motive- Homeostasis.

## **REFERENCES:**

1. Mangal S K (2008) 16<sup>th</sup> Reprint General Psychology, Sterling Publishers Pvt Ltd, New Delhi, India.
2. Morgan T Clifford, King A Richard et al (2005) 28<sup>th</sup> Reprint, Introduction to Psychology, Tata McGraw – Hill Publishing Company Ltd, New Delhi.
3. Berk, L. E. (1994) (3rd edition). Child Development. New York: Allan Bacon.

Digital Open Educational Resources (DOER):

<https://www.simplypsychology.org/developmental-psychology.html#:~:text=Developmental%20psychology%20is%20a%20scientific%20approach%20which%20aims,feeling,%20and%20behavior%20change%20throughout%20a%20person%E2%80%99s%20life>



**EVALUATION PATTERN**

<b>SCHOLASTIC</b>				<b>NON - SCHOLASTIC</b>	<b>MARKS</b>		
<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>CIA</b>	<b>ESE</b>	<b>Total</b>
<b>10</b>	<b>10</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>40</b>	<b>60</b>	<b>100</b>

**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

<b>NO.</b>	<b>COURSE OUTCOMES</b>	<b>KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)</b>	<b>PSOs ADDRESSED</b>
<b>CO 1</b>	Identify the basic concepts and methods of Psychology	<b>K1</b>	<b>PSO11</b>
<b>CO 2</b>	Summarize the Concepts of Human Intelligence	<b>K2</b>	<b>PSO11 and PSO12</b>
<b>CO 3</b>	Determine the significances Human Learning in the context of Self-development and Social Adjustment	<b>K3</b>	<b>PSO11 and PSO22</b>
<b>CO 4</b>	Identify the concepts related to motivational aspects of Behaviour.	<b>K1</b>	<b>PSO11 and PSO12</b>
<b>CO 5</b>	Determine the Significance of Personality development and socialization for Day today life	<b>K3</b>	<b>PSO12 PSO22 and PSO23</b>

**Mapping of COs with PSOs**

## CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

CO / PS O	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9	PSO10	PSO11	PSO12
CO 1	1	1	1	1	1	1	1	1	1	1	2	1
CO 2	1	1	1	1	1	1	1	1	1	1	2	2
CO 3	1	1	1	1	1	1	1	1	1	1	1	1
CO 4	1	1	1	1	1	1	1	1	1	1	1	1
CO 5	1	1	1	1	1	1	1	1	1	1	1	1
CO / PS O	PSO13	PSO14	PSO15	PSO16	PSO17	PSO18	PSO19	PSO20	PSO21	PSO22	PSO23	
CO 1	1	1	1	1	1	1	1	1	1	1	1	
CO 2	1	1	1	1	1	1	1	1	1	2	1	
CO 3	1	1	1	1	1	1	1	1	1	1	2	
CO 4	1	1	1	1	1	1	1	1	1	1	1	
CO 5	1	1	1	1	1	1	1	1	1	1	1	

## Mapping of COs with Pos

CO/ PSO	PO1	PO2	PO3	PO4
CO1	3	1	1	1

<b>CO2</b>	1	1	1	1
<b>CO3</b>	1	1	2	1
<b>CO4</b>	1	1	1	3
<b>CO5</b>	1	1	1	1


**Note:** Strongly Correlated – 3  
Weakly Correlated -1

Moderately Correlated – 2

#### **COURSE DESIGNER:**

1. Staff Name –Dr. S. Santhi
2. Staff Name –Dr. P. Jesintha Josephine Julie

**Forwarded By**



(Dr.Vasantha Esther Rani)

### **II B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY SEMESTER –III** *For those who joined in 2019 onwards*

<b>PROGRAMME CODE</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CATEGORY</b>	<b>HRS/WEEK</b>	<b>CREDITS</b>
<b>UAHS</b>	<b>19N3CC7</b>	<b>EXTENSION EDUCATION AND COMMUNICATION</b>	<b>Lecture</b>	<b>5</b>	<b>4</b>

#### **COURSE DESCRIPTION**

This course creates awareness on the principles of extension education and extension teaching methods

#### **COURSE OBJECTIVES**

- To understand the concept of community development and panchayat raj.
- To create awareness on women welfare scheme
- To impart knowledge on communication methods
- To develop skill in preparing audio-visual aids
- To understand different extension teaching methods.

**UNITS**

<b>UNIT – I</b>	<b>EXTENSION EDUCATION</b>	<b>[15 HRS]</b>
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Meaning, objectives and Principles of Extension and definition of Home science extension, Allied concepts Formal, Nonformal, Qualities, Role and Functions of Extension Workers

History of CDP in India, Panchayat Raj – Three tier system, Program Planning.

<b>UNIT – II</b>	<b>WOMEN WELFARE PROGRAMMES</b>	<b>[15 HRS]</b>
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RMK, IMY, MGNREGS, PMRY & National livelihood programme, National Rural livelihood mission, National Social Assistance Scheme ,TRYSEM, DWCRA, SHG, Women Welfare Programmes

<b>UNIT – III</b>	<b>COMMUNICATION</b>	<b>[15 HRS]</b>
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Communication Definition, Meaning, Objectives & Principles

**Self Study-Elements of communication, barriers to communication**

<b>UNIT – IV</b>	<b>EXTENSION TEACHING METHODS</b>	<b>[15 HRS]</b>
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Meaning and teaching, Classification of extension teaching methods

- Individual methods: Farm & home visit, farmer's call & personal letters.
- Group methods: Result demonstration, method demonstration, group meetings, study tour.
- Mass methods: Publications – Leaflet, Pamphlet, Folder, mass meetings, exhibition, campaign, newspaper, Radio and T.V.

<b>UNIT – V</b>	<b>AUDIO-VISUAL AIDS</b>	<b>[15 HRS]</b>
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Definition, Classification, criteria for selection and evaluation of audiovisual aids & Cone of Experience.

**Audio Aids:** E-Communication methods, Public address system, Radio

**Visual Aids:**

- Projected: Slides, filmstrip, opaque projection, overhead projection.
- Non – projected: Chalkboard, Bulletin board, flannel graph, flash card, poster diagram, map, chart, graph, specimen and models.

**Audio visual aids:** Television, Motion pictures, Drama, Puppet show

**REFERENCES**

**TEXTBOOK:**

1. Adivi Reddy.( 1973) *Extension Education*, Lakshmi Pub, Andrapradesh.

**REFERENCE BOOKS:**

1. Dhaina&BatnagarO.P.( 1980) *Education and communication for Development*, Oxford Pub., New Delhi.
2. Roy, G.L. (1994). *Extension Communication and Management*, New Delhi,

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1. <https://www.economicdiscussion.net/india/community-development-cd-programme/21647>
2. <https://www.worldcat.org/title/extension-education-communication/oclc/808776384>
3. <http://eagri.org/eagri50/AEXT392/lec03.html>
4. <https://www.slideshare.net/MOHDAALENAVI/extension-teaching-84053118>
5. <http://studylecturenates.com/audio-visual-aids-in-education-definition-types-objectives/>
6. <http://lms.tanuvas.ac.in/mod/resource/view.php?id=39787>
7. <https://lidtfoundations.pressbooks.com/chapter/edgar-dale-and-the-cone-of-experience/>
8. [https://www.queensu.ca/teachingandlearning/modules/active/documents/Dales\\_Cone\\_of\\_Experience\\_summary.pdf](https://www.queensu.ca/teachingandlearning/modules/active/documents/Dales_Cone_of_Experience_summary.pdf)
9. [https://en.wikipedia.org/wiki/Welfare\\_schemes\\_for\\_women\\_in\\_India](https://en.wikipedia.org/wiki/Welfare_schemes_for_women_in_India)
10. <https://wcd.nic.in/sites/default/files/24-05010215wcdmedia.pdf>
11. [https://en.wikipedia.org/wiki/Panchayati\\_raj\\_in\\_India](https://en.wikipedia.org/wiki/Panchayati_raj_in_India)

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT 1 –Extension Education</b>				
1.1	Meaning, objectives and Principles of Extension and definition of Home science extension	4	Chalk & Talk	Black Board
1.2	Allied concepts Formal, Nonformal	2	Chalk & Talk	LCD

1.3	Qualities, Role and Functions of Extension Workers	4	Lecture	PPT & White board
1.4	History of CDP in India	5	Lecture	Smart Board
1.5	Panchayat Raj – Three tier system & Program Planning	5	Lecture	Black Board
<b>UNIT -2 WOMEN WELFARE PROGRAMMES</b>				
2.1	Introduction	2	Lecture	LCD
2.2	RMK, IMY	4	Chalk & Talk	LCD
2.3	MGNREGS, PMRY	4	Lecture	PPT & White board
2.4	National livelihood programme, National Rural livelihood mission	3	Discussion	PPT
2.5	National Social Assistance Scheme	2	Lecture	Black board
<b>UNIT -3 COMMUNICATION</b>				
3.1	Communication Definition, Meaning	2	Lecture	Black board
3.2	Objectives & Principles	2	Lecture	LCD
3.3	Elements of communication	3	Chalk & Talk	LCD
3.4	Models of Communication	4	Lecture	PPT & White board

3.5	Barriers to communication	4	Discussion	PPT & White board
<b>UNIT -4 EXTENSION TEACHING METHODS</b>				
4.1	Extension Teaching methods -Teaching, Meaning and Definition.	1	Lecture	LCD
4.2	Classification of Teaching methods	1	Chalk & Talk	LCD
4.3	Individual methods: Farm & home visit, farmer's call & personal letters	3	Lecture	PPT & White board
4.4	Group methods: Result demonstration, method demonstration, group meetings, study tour.	5	Lecture	PPT & White board
4.5	Mass methods: Publications – Leaflet, Pamphlet, Folder and mass meetings.	5	Chalk & Talk	LCD
4.6	Mass methods: Exhibition, campaign, newspaper, Radio and T.V.	5	Discussion	PPT
<b>UNIT -5 AUDIO- VISUAL AIDS</b>				
5.1	AUDIO VISUAL AIDS - Definition, Classification	1	Lecture	LCD
5.2	Criteria for selection and evaluation of audiovisual aids & Cone of Experience.	3	Chalk & Talk	LCD

5.3	<b>Audio Aids:</b> E-Communication methods, Public address system, Radio	3	Lecture	PPT & White board
5.4	<b>Visual Aids:</b> Projected: Slides, filmstrip, opaque projection, overhead projection.	3	Lecture	PPT & White board
5.5	<b>Visual Aids:</b> Non - projected: Chalkboard, Bulletin board, flannel graph, flash card, poster diagram, map, chart, graph, specimen and models.	5	Chalk & Talk	LCD
5.6	<b>Audio visual aids:</b> Television, Motion pictures, Drama, Puppet show	5	Discussion	PPT

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11



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<b>K4</b>	3	3	-	5	-	11	-	11
<b>Non Scholastic</b>	-	-	-	-	-		5	5
<b>Total</b>	10	10	5	5	5	35	5	40

<b>CIA</b>	
<b>Scholastic</b>	<b>35</b>
<b>Non Scholastic</b>	<b>5</b>
	<b>40</b>

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

**K1**- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

### EVALUATION PATTERN

<b>SCHOLASTIC</b>					<b>NON - SCHOLASTIC</b>	<b>MARKS</b>		
<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>CIA</b>	<b>ESE</b>	<b>Total</b>
<b>10</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>40</b>	<b>60</b>	<b>100</b>

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment**C5** - OBT/PPT**C6** – Non - Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Define the concepts of Home Science Extension Education.	K1	PSO22
CO 2	Describe the various welfare-programmes for women	K2, K3	PSO22
CO 3	Explain the principles and models of communication	K1,K2	PSO22
CO 4	Classify the extension teaching methods.	K2, K4	PSO22
CO 5	Construct audio –visual aids.	K3, K4	PSO22

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1

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<b>CO3</b>	1	1	1	1	1	1	1	1	1	1	1	1
<b>CO4</b>	1	1	1	1	1	1	1	1	1	1	1	1
<b>CO5</b>	1	1	1	1	1	1	1	1	1	1	1	1
<b>CO/ PSO</b>	<b>PSO 13</b>	<b>PSO 14</b>	<b>PSO 15</b>	<b>PSO 16</b>	<b>PSO 17</b>	<b>PSO 18</b>	<b>PSO 19</b>	<b>PSO 20</b>	<b>PSO 21</b>	<b>PSO 22</b>	<b>PSO 23</b>	
<b>CO1</b>	1	1	1	1	1	1	1	1	1	3	1	
<b>CO2</b>	1	1	1	1	1	1	1	1	1	3	1	
<b>CO3</b>	1	1	1	1	1	1	1	1	1	3	1	
<b>CO4</b>	1	1	1	1	1	1	1	1	1	3	1	
<b>CO5</b>	1	1	1	1	1	1	1	1	1	3	1	

**Mapping of COs with POs**

<b>CO/ PSO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>
<b>CO1</b>	3	1	1	1
<b>CO2</b>	1	1	1	1
<b>CO3</b>	1	1	1	1
<b>CO4</b>	1	1	1	3
<b>CO5</b>	1	1	1	3

**Note:**   ♦ Strongly Correlated – 3               ♦ Moderately Correlated – 2  
              ♦ Weakly Correlated -1

**COURSE DESIGNER:**  
**Dr. C. Priyalatha**

**Forwarded By**



(Dr.Vasantha Esther Rani)

**II B.Sc. – HOME SCIENCE WITH FOOD BIOTECHNOLOGY**  
**SEMESTER –III**

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N3CC8	FIBRE TO FABRIC	Lecture	4	3

## **COURSE DESCRIPTION**

This course enlightens the students on the various steps in the conversion of fibre into fabric. It also deals with the dyeing and printing techniques.

## **COURSE OBJECTIVES**

- The course will make the students
- To gain knowledge on the various textile fibres, their manufacture, spinning and weaving operations.
- To understand the basic and functional finishes applied on fabrics and the qualities imparted.
- To develop skill to choose appropriate dyes and printing technique for a given fabric.

## **UNITS**

### **UNIT –I CLASSIFICATION AND MANUFACTURING PROCESS OF TEXTILE**

#### **FIBRES**

**(15HRS.)**

Classification of textile fibres

blends and mixtures. Manufacturing process of:

1. Natural fibres Cotton, Linen, Wool Silk and Asbestos
2. Man-made fibres Rayon, Nylon, Polyester, Acrylic and Glass

**Self-Study: Minor fibres – Jute, Hemp, Kapok, Coir.**

### **UNIT –II FIBRE IDENTIFICATION, PROPERTIES AND SPINNING**

**(10 HRS.)**

1. Identification of textile fibres
2. Physical properties of fibres
3. Yarn making Spinning
4. Types of yarn simple, complex and novelty.

**Self-Study: Mechanical and Chemical spinning**

### **UNIT –III FABRIC MANUFACTURING TECHNIQUES**

**(15 HRS.)**

1. Weaving basic plain, twill, satin; Fancy weaves Pile, Dobby and Jacquard.

2. Non-woven Knitting, felting, and bonding

**UNIT –IV FABRIC FINISHING**

**(10 HRS.)**

1. Basic singeing, scouring, bleaching, mercerizing, sizing, calendering, tentering.
2. Functional water proofing, water repellency, fire proofing, moth proofing, sanforising, crease recovery.

**UNIT –V DYEING AND PRINTING**

**(10 HRS.)**

1. Classification of dyes, application to different fibres, stages of dyeing.
2. Printing: Hand: Resist, stencil, screen and block.
3. Machine: Rotary Screen Printing, Roller Printing

**REFERENCES:**

**TEXTBOOK:**

1. Dantyagi, S. (1996). Fundamentals of textiles and their care. Orient Longman Limited, New Delhi.

**REFERENCE BOOKS:**

1. Gordon Cook, J. (2001). Handbook of Textile Fibres. Woodhead Publishing Ltd, England.
2. Howard L. Needles. (2001). Textile Fibres, Dyes, Finishes and Processes. Standard Publishers Distributors, Delhi.
3. Lord, P.R. & Mohamed, M.H. (2001) Weaving: Conversion of yarn to Fabric. Woodhead Publishing Ltd, England.
4. Rattan, J.B. (2001). Modern Textile Technology. Abhishek Publications, Chandigarh.
5. Sara J Kadoh. (2009). The Textiles. Dorling Kindersley India Pvt., Ltd.
6. Vidyasagar, P. V. (1998). Handbook of Textiles. Mittal Publications.
7. Murphy, W.S. (2003). Handbook of Weaving. Abhishek Publications, Chandigarh.

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<https://en.wikipedia.org/wiki/Textile>

<https://www.amazon.in/Spinning-Tillie-Walden-ebook/dp/B074ZGMTY2>

<https://www.textileebook.com/2019/04/principles-of-textile-finishing-asim-kumar-roy-choudhury.html>

<https://textilestudycenter.com/library/>

### **COURSE CONTENTS & LECTURE SCHEDULE:**

<b>Module No.</b>	<b>Topic</b>	<b>No. of Lectures</b>	<b>Teaching Pedagogy</b>	<b>Teaching Aids</b>
<b>UNIT -1 CLASSIFICATION AND MANUFACTURING PROCESS OF TEXTILE FIBRES</b>				
1.1	Classification of textile fibres, Blends and mixtures	2	Chalk & Talk	Black Board
1.2	Cotton, Linen	4	Chalk & Talk	Black Board
1.3	Wool, Silk	4	Lecture	PPT
1.4	Asbestos, Glass	1	Chalk & Talk	Black Board
1.5	Rayon, Nylon	2	Chalk & Talk	Black Board
1.6	Polyester, Acrylic	2	Chalk & Talk	Black Board
<b>UNIT -2 FIBRE IDENTIFICATION, PROPERTIES AND SPINNING</b>				
2.1	Identification of textile fibres	3	Lecture	PPT

2.2	Physical properties of fibres	3	Chalk & Talk	Black Board
2.3	Yarn making – Spinning	2	Chalk & Talk	Black Board
2.4	Types of yarn – Simple, complex and novelty	2	Chalk & Talk	Black Board
<b>UNIT – 3 FABRIC MANUFACTURING TECHNIQUES</b>				
3.1	Weaving – Definition, parts and functions of a loom	1	Chalk & Talk	Black Board
3.2	Basic weaves: Plain, Twill, Satin	4	Chalk & Talk	Black Board
3.3	Pile and Dobby weave	2	Chalk & Talk	Black Board
3.4	Jacquard weave	2	Chalk & Talk	Black Board
3.5	Knitting	2	Chalk & Talk	Black Board
3.6	Felting, Bonding	4	Chalk & Talk	Black Board
<b>UNIT – 4 FABRIC FINISHING</b>				
4.1	Singeing, Scouring	1	Chalk & Talk	Black Board
4.2	Bleaching, Mercerising, Sizing	2	Chalk & Talk	Black Board
4.3	Calendering, Tenterring	2	Chalk &	Black



			Talk	Board
4.4	Water proofing, water repellency, fire proofing, moth proofing	3	Chalk & Talk	Black Board
4.5	Sanforising, crease recovery	2	Chalk & Talk	Black Board
<b>UNIT – 5 DYEING AND PRINTING</b>				
5.1	Classification of dyes	2	Chalk & Talk	Black Board
5.2	Application of dyes to different fibres, Stages of dyeing	2	Chalk & Talk	Black Board
5.3	Hand printing: Resist, Stencil, Screen and Block	3	Lecture	PPT
5.4	Roller, Rotary screen	3	Lecture	PPT

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1	T2	Quiz	Assignment	OBT/PP T				
	10 Mks	10 Mks	5 Mks	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %

<b>K4</b>	<b>3</b>	<b>3</b>	<b>-</b>	<b>5</b>	<b>-</b>	<b>11</b>	<b>-</b>	<b>11</b>	<b>27.5 %</b>
<b>Non Scholastic</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>		<b>5</b>	<b>5</b>	<b>12.5 %</b>
<b>Total</b>	<b>10</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>35</b>	<b>5</b>	<b>40</b>	<b>100 %</b>

<b>CIA</b>	
<b>Scholastic</b>	<b>35</b>
<b>Non Scholastic</b>	<b>5</b>
	<b>40</b>

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

## EVALUATION PATTERN

<b>SCHOLASTIC</b>					<b>NON - SCHOLASTIC</b>	<b>MARKS</b>		
<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>CIA</b>	<b>ESE</b>	<b>Total</b>
<b>10</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>40</b>	<b>60</b>	<b>100</b>

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz**C4** – Assignment**C5** - OBT/PPT**C6** – Non - Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Classify the textile fibres and describe the manufacturing process of natural, manmade and minor textile fibres.	K2	PSO8
CO 2	Identify the fibre content of the fabric.	K1, K3	PSO8
CO 3	Illustrate and give examples of yarns and weaves.	K2, K4	PSO8
CO 4	Choose the basic and functional finishes based on the end use of the material.	K1, K3	PSO8
CO 5	Restate in own words the pros and cons of natural and synthetic dyes.	K1	PSO8
CO 6	Describe the hand and machine printing techniques.	K1	PSO8

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO	PSO	PSO
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## CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

										10	11	12
<b>CO1</b>	1	1	1	1	1	1	1	3	1	1	1	1
<b>CO2</b>	1	1	1	1	1	1	1	3	1	1	1	1
<b>CO3</b>	1	1	1	1	1	1	1	3	1	1	1	1
<b>CO4</b>	1	1	1	1	1	1	1	3	1	1	1	1
<b>CO5</b>	1	1	1	1	1	1	1	3	1	1	1	1
<b>CO/ PSO</b>	<b>PSO 13</b>	<b>PSO 14</b>	<b>PSO 15</b>	<b>PSO 16</b>	<b>PSO 17</b>	<b>PSO 18</b>	<b>PSO 19</b>	<b>PSO 20</b>	<b>PSO 21</b>	<b>PSO 22</b>	<b>PSO 23</b>	
<b>CO1</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO2</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO3</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO4</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO5</b>	1	1	1	1	1	1	1	1	1	1	1	

## Mapping of COs with POs

<b>CO/ PSO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>
<b>CO1</b>	1	1	2	1
<b>CO2</b>	1	1	2	1
<b>CO3</b>	1	1	2	1
<b>CO4</b>	1	2	2	2
<b>CO5</b>	1	2	2	2

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦

Weakly Correlated -1

**COURSE DESIGNER:**  
**Dr.R.Latha**

**Forwarded by**



(Dr.Vasantha Esther Rani)

**II B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY**  
**SEMESTER –III**

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N3CC9	BASICS OF CLOTHING CONSTRUCTION LAB	Practical	3	2

**COURSE DESCRIPTION**

This practical paper aims at imparting skill in the basics of stitching a garment.

**COURSE OBJECTIVES**

- To familiarize students with the parts and functions of the sewing machine.
- To impart skill in constructing seams, darts, tucks, pleats and gathers.
- To make the students apply appropriate edge finishes to garments.
- To develop skill in attaching pockets and yokes to dresses.

**UNITS****UNIT -I****(5 HRS.)**

Parts and functions of the sewing machine, use and care.

**UNIT -II****(10 HRS.)**

Seams and seam finishes: plain seam, flat fell seam, French seam, single top stitching, double top stitching.

**UNIT -III****(10 HRS.)**

Fullness: Darts, tucks, pleats, gathers and shirrs.

**UNIT -IV****(10 HRS.)**

Edge finishing: Bias binding, facing and hems.

**UNIT -V****(10HRS.)**

Pockets and yokes.

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1</b>				
1.1	Parts and functions of the sewing machine	3	Chalk & Talk	Black Board

1.2	Use and care of sewing machine	2	Demonstration	Sewing machine
<b>UNIT - 2</b>				
2.1	Seams: plain, flat fell, French	5	Demonstration	Sewing machine
2.2	Seam Finishes: Single top stitching, double top stitching	5	Demonstration	Sewing machine
<b>UNIT - 3</b>				
3.1	Fullness: Darts, Tucks, Pleats	5	Demonstration	Sewing machine
3.2	Gathers and Shirrs	5	Demonstration	Sewing machine
<b>UNIT - 4</b>				
4.1	Edge finishing: Bias binding, facing	5	Demonstration	Sewing machine
2.2	Types of hems	5	Demonstration	Sewing machine
<b>UNIT - 5</b>				
5.1	Pockets	5	Demonstration	Sewing machine
5.2	Yokes	5	Demonstration	Sewing machine

**EVALUATION PATTERN**

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test - 1

**C2** – Internal Test - 2

**C3** – Model Practical Exam

**C4**– Record

**C5** –Non-Scholastic

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Identify the parts and functions of the sewing machine.	K1, K3	PSO9
CO 2	Construct various seams and seam finishes.	K3	PSO9
CO 3	Build samples for introducing fullness in a garment.	K3	PSO9



CO 4	Choose and apply appropriate edge finishes like binding, facing and hems.	K1, K3	PSO9
CO 5	Illustrate and develop pockets and yokes	K2, K4	PSO9

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	3	1	1	1
CO2	1	1	1	1	1	1	1	1	3	1	1	1
CO3	1	1	1	1	1	1	1	1	3	1	1	1
CO4	1	1	1	1	1	1	1	1	3	1	1	1
CO5	1	1	1	1	1	1	1	1	3	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

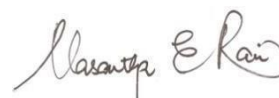
CO/ PSO	PO1	PO2	PO3	PO4
CO1	1	1	1	2
CO2	1	1	1	2

<b>CO3</b>	1	1	1	2
<b>CO4</b>	1	1	1	2
<b>CO5</b>	1	1	1	2

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

**COURSE DESIGNERS:**

- 1. Dr.R.Latha**
- 2. Ms.J.JosephineJesintha**

**Forwarded By**


(Dr.Vasantha Esther Rani)

**II B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY**  
**SEMESTER –III**

*For those who joined in 2019 onwards*

<b>PROGRAMME CODE</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>CATEGORY</b>	<b>HRS/WEEK</b>	<b>CREDITS</b>
<b>UAHS</b>	<b>19N3AC1</b>	<b>CATERING AND HOTEL MANAGEMENT</b>	<b>Lecture</b>	<b>3</b>	<b>3</b>

**COURSE DESCRIPTION**

This course describes the role of front office and housekeeping in Hotel Management

**COURSE OBJECTIVES**

- Learn the functions of the front office and Housekeeping
- Understand their importance in increasing the revenue of hotels

## UNITS

### **UNIT –I INTRODUCTION TO HOTEL INDUSTRY**

**(9 Hrs.)**

Hotel – Definition, Evolution of Hotel industry, Types of hotels, Organization chart of a hotel – small and large, Types of catering establishment, Star classification and its features.

### **UNIT –II FRONT OFFICE MANAGEMENT**

**(9 Hrs.)**

Front office- Definition, Importance of front office, Front office organization layout, sections of front office. Duties and responsibilities of front office staff, Types of room, Types of plans, Types of room rates.

### **UNIT-III HOTEL RESERVATION AND RECEPTION**

**(9Hrs.)**

Reservation – Definition, Types of reservation, Reservation- procedure, Sources of reservation, Modes of reservation.

Reception - Duties and responsibilities of lobby manager, Guest luggage handling procedure, C- form.

Front office accounting – Definition, Types of account, Types of posting in a guest account, Safeguard of hotel credit facility, Foreign currency exchange Registration - Check in and Checkout procedure, Guest cycle.

### **UNIT –IV HOUSEKEEPING MANAGEMENT**

**(9 Hrs.)**

Housekeeping department- Definition, Importance, Organization chart, Duties and responsibilities of housekeeping staff, Interdepartmental relationship of front office and housekeeping.

Bed making- Procedure of bed making.

Room report- Preparation of room report, Check lists.

Linen- Classification of linen, Modes of obtaining linen.

Furnishings- Soft furnishings, Floor furnishings-Carpets and Wallcovering.

### **UNIT –V CLEANING AND LAUNDRY MANAGEMENT**

**(9 Hrs.)**

Laundry procedures, laundryequipment, Stain removal.

Cleaning– Methods, Cleaning agents Classification, Selection of cleaning equipment,

**Self-study: Uniform- Selection, Code, and maintenance of staff uniform.**

## **REFERENCES:**

## **TEXTBOOK:**

1. Andrews.S.(1995).*Hotel Front Office Training Manual*, Tata McGraw Hill, New Delhi.

**REFERENCE BOOKS:**

1. Allen D.M. (1992). *Accommodation and cleaning service*, Vol II Management
2. Andrews.S.( 1982). *Housekeeping Training Manual*, Tata McGraw Hill, New Delhi.
3. Negi Jagmohan (2007). *Managing Hotel and Restaurants*, Authors Press

**OPEN EDUCATIONAL REFERENCES:**

1. <https://ncert.nic.in/textbook/pdf/lehe104.pdf>
2. <https://drive.google.com/file/d/1mrFlogclLZqR1VLDsqI4ikqvTI2sOB8n/view>
3. <https://www.ihmnotessite.net/front-office>
4. <https://www.ihmnotessite.net/accomodation>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 INTRODUCTION TO HOTEL INDUSTRY</b>				
1.1	Hotel – Definition, Evolution of Hotel industry, Types of hotels.	3	Lecture	PPT
1.2	Organization chart of a hotel – small and large.	2	Chalk & Talk	Black Board
1.3	Types of catering establishment.	2	Chalk & Talk	Black Board
1.4	Star classification and its features.	2	Chalk & Talk	Black Board

<b>UNIT -2 FRONT OFFICE MANAGEMENT</b>				
2.1	Front office- Definition, Importance of front office, Front office organization layout.	3	Chalk & Talk	Black Board
2.2	Sections of front office. Duties and responsibilities of front office staff.	3	Lecture	PPT
2.3	Types of room, Types of plans, Types of room rates.	3	Lecture	PPT, Video
<b>UNIT -3 HOTEL RESERVATION AND RECEPTION</b>				
3.1	Reservation – Definition, Types of reservation, Reservation- procedure, Sources of reservation, Modes of reservation.	2	Chalk & Talk	Black Board
3.2	Reception - Duties and responsibilities of lobby manager.	2	Chalk & Talk	Black Board
3.3	Guest luggage handling procedure, C- form.	1	Chalk & Talk	Black Board
3.4	Front office accounting – Definition, Types of account, Types of posting in a guest account, Safeguard of hotel credit facility, foreign currency exchange.	2	Chalk & Talk	Black Board
3.5	Registration - Check in and Checkout procedure, Guest cycle.	2	Chalk & Talk	Black Board
<b>UNIT -4 HOUSEKEEPING MANAGEMENT</b>				

4.1	Housekeeping department- Definition, Importance, Organization chart.	2	Chalk & Talk	Black Board
4.2	Duties and responsibilities of housekeeping staff, Interdepartmental relationship of front office and house Keeping.	2	Lecture	PPT
4.3	Bed making- Procedure of bed making. Room report- Preparation of room report, Check lists.	2	Lecture	PPT
4.4	Linen- Classification of linen, Modes of obtaining linen. Furnishings- Soft furnishings, Floor furnishings-Carpets and Wall covering.	3	Chalk & Talk	Black Board
<b>UNIT -5 CLEANING AND LAUNDRY MANAGEMENT</b>				
5.1	Laundry procedure	2	Lecture	PPT, Video
5.2	Laundry equipment	2	Chalk & Talk	Black Board
5.3	Stain removal	1	Chalk & Talk	Black Board
5.4	Cleaning- Methods	2	Lecture	PPT
5.5	Selection of cleaning equipment	1	Lecture	PPT
5.6	Cleaning agents Classification	1	Lecture	PPT, Video

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
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## CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

	T1	T2	Quiz	Assignme nt	OBT /PPT				
	10 Mks .	10 Mks .	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks .	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholast ic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

CIA	
Scholastic	35
Non Scholastic	5
	40

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

K1- Remember, K2-Understand, K3-Apply, K4-Analyse

**EVALUATION PATTERN**

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1**C2** – Internal Test-2**C3** - Quiz**C4** – Assignment**C5** - OBT/PPT**C6** – Non - Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Identify the different types of catering establishments and front office management.	K3	PSO6
CO 2	Explain the functions of front office department.	K2	PSO6
CO 3	Plan reservation and registration procedure.	K3	PSO6



CO 4	Describe the management and functioning of housekeeping department.	K2	PSO6
CO 5	Classify the cleaning agents and equipment.	K2	PSO6

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	3	1	1	1	1	1	1
CO2	1	1	1	1	1	3	1	1	1	1	1	1
CO3	1	1	1	1	1	3	1	1	1	1	1	1
CO4	1	1	1	1	1	3	1	1	1	1	1	1
CO5	1	1	1	1	1	3	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	1	1	1	2

<b>C02</b>	1	1	1	2
<b>C03</b>	1	1	1	2
<b>C04</b>	1	1	1	2
<b>C05</b>	1	1	1	2

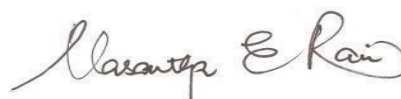
**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦

Weakly Correlated -1

**COURSE DESIGNER:**

1. Mrs. P. Magdalene Virjini
2. Mrs. J. Josephine Jesintha

**Forwarded By**



(Dr.Vasantha Esther Rani)

**II B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY  
SEMESTER –III**

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N3AC2	CATERING AND HOTEL MANAGEMENT - LAB	Practical	2	2

### COURSE DESCRIPTION

This course gives a practical knowledge and hands on experience on the front office Management and housekeeping skills.

### COURSE OBJECTIVES

- Filling of various documents used in front Office
- Registration procedures
- Handling reservations and telephone Manners
- Use of cleaning equipment and cleaning agents for various surfaces
- Bed making procedures

### UNITS

#### **UNIT -I HOTEL ORGANIZATION (6 HRS.)**

Identification of organization structure of different star hotels.

#### **UNIT -II RESERVATION AND REGISTRATION (6 HRS.)**

Reservation and registration procedure.

#### **UNIT-III BED MAKING (6HRS.)**

Bed making procedure.

#### **UNIT -IV FRONT OFFICE OPERATION (6 HRS.)**

Exhibiting front office process.

#### **UNIT -V HOUSEKEEPING**

Understanding Cleaning equipment and agents of different hotels. (6 HRS.)

### REFERENCES:

1. Allen D.M. (1992). *Accommodation and cleaning service*, Vol II Management

2. Andrews.S.(1995). *Hotel Front Office Training Manual*, Tata McGraw Hill, New Delhi.
3. Andrews.S.( 1982). *House Keeping Training Manual*, Tata McGraw Hill, New Delhi.
4. Negi Jagmohan (2007). *Managing Hotel and Restaurants*, Authors Press .

**OPEN EDUCATIONAL REFERENCES:**

1. <https://ncert.nic.in/textbook/pdf/lehe104.pdf>
2. <https://drive.google.com/file/d/1mrFlogclLZqR1VLDsqI4ikqvTI2sOB8n/view>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 HOTEL ORGANIZATION</b>				
1.1	Identification of organization structure of different star hotels.	6	Chalk & Talk	Sample Hotel Records & Brochures
<b>UNIT -2 RESERVATION AND REGISTRATION</b>				
2.1	Reservation and registration procedure layout.	6	Demonstration	Sample Hotel Registers and Files
<b>UNIT -3 BED MAKING</b>				
3.1	Bed making procedure.	6	Demonstration	Essential Materials
<b>UNIT -4 FRONT OFFICE OPERATION</b>				

4.1	Exhibiting front office process.	6	Role Play	Essential Materials
<b>UNIT -5 HOUSEKEEPING</b>				
5.1	UnderstandingCleaning equipment and agents of different hotels.	6	Demonstration	Samples

**EVALUATION PATTERN**

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test - 1**C2** – Internal Test - 2**C3** – Model Practical Exam**C4** – Record**C5** – Non – Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL	PSOs ADDRESSED
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		(ACCORDING TO REVISED BLOOM'S TAXONOMY)	
CO 1	Recall organization structure and management	K1	PSO6
CO 2	Plan reservation and registration procedure	K3	PSO6
CO 3	Illustrate bed making procedure	K4	PSO6
CO 4	Exhibiting front office process	K1	PSO6
CO 5	Understanding Cleaning equipment and agents of different hotels	K2	PSO6

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	3	1	1	1	1	1	1
CO2	1	1	1	1	1	3	1	1	1	1	1	1
CO3	1	1	1	1	1	3	1	1	1	1	1	1
CO4	1	1	1	1	1	3	1	1	1	1	1	1
CO5	1	1	1	1	1	3	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	

<b>CO3</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO4</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO5</b>	1	1	1	1	1	1	1	1	1	1	1	

### Mapping of COs with Pos


CO/ PSO	P01	P02	P03	P04
<b>CO1</b>	1	1	1	2
<b>CO2</b>	1	1	1	2
<b>CO3</b>	1	1	1	2
<b>CO4</b>	1	1	1	2
<b>CO5</b>	1	1	1	2

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦  
Weakly Correlated -1

#### COURSE DESIGNER:

1. Mrs. P. Magdalene Virjini
2. Mrs. J. Josephine Jesintha

**Forwarded By**



(Dr.Vasantha Esther Rani)

## II B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY SEMESTER –III

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N3SB1	ENTREPRENEURIAL SKILLS – SURFACE ORNAMENTATION	Lecture / Practical	2	2

### COURSE DESCRIPTION

This skill-based paper aims at imparting hand embroidery and fabric painting techniques.

### COURSE OBJECTIVES

- To develop skill in making hand embroidery stitches.
- To encourage students to apply embroidery on tablecloth, handkerchief, tops and blouse.
- To inculcate fabric painting technique in students and make them use this skill on clothing and household linen.

### UNITS

#### UNIT -I

**(6 HRS.)**

Development of design from a basic motif applying the elements and principles of design.

#### UNIT -II

**(6 HRS.)**

Embroidery – Basic hand stitches like chain, satin, long and short, feather, back.

**Self-Study: Lazy daisy, French knot, bullion knot, Herring bone, Buttonhole.**

#### UNIT -III

**(6 HRS.)**

Application of embroidery stitches on table cloth, handkerchief, tops and blouse.



**UNIT –IV**

**(6 HRS.)**

Fabric painting study of paints & brush available, different methods of painting.

**UNIT –V**

**(6 HRS.)**

Application of fabric painting technique on place mats, pillow cover, saree and kameez.

**REFERENCES:**

- 1.Creative Craft in Fabric and Yarn . (1979). Gallery Press, London.
- 2.Gladys Cunnigharn. (1969). Singer Sewing Book. Golden press, New York.
- 3.Julia Barton. (1989). The Art of Embroidery. Merchurst Ltd., London.
- 4.Pamela Cabburn. (1976). The Needle Work's Dictionary. William and Morrow and Company, Inc. New York.
- 5.Reader's Digest. (1955). Complete Guide to Needlework.
- 6.Simon and Schuster. (1960). McCall's Treasury of Needle craft. Schuster Publishing, New York.
- 7.The ultimate Design Source Book for Crafters. (2007). Search Press Ltd, Kent, Australia.

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT - 1</b>				
1.1	Development of design	3	Chalk & Talk	Black Board
1.2	Application of elements and principles of design	3	Lecture	LCD
<b>UNIT - 2</b>				
2.1	Basic hand stitches	3	Lecture	PPT
2.2	Chain, Back, Satin, Long & short, Feather	3	Lecture	PPT
<b>UNIT - 3</b>				
3.1	Application of embroidery stitches on table cloth, hand kerchief	3	Specimen	PPT
3.2	Application of stitches on tops and blouse	3	Specimen	PPT
<b>UNIT - 4</b>				
4.1	Study of paints and brush	3	Lecture	White Board
4.2	Different methods of painting	3	Lecture	PPT
<b>UNIT - 5</b>				

## CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

5.1	Fabric painting on placemats and pillow cover	3	Specimen	PPT
5.2	Fabric painting on saree and kameez	3	Specimen	PPT

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1	T2	Quiz	Assignment	OBT/PPT				
	10 Mks	10 Mks	5 Mks	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

CIA

<b>Scholastic</b>	<b>35</b>
<b>Non Scholastic</b>	<b>5</b>
	<b>40</b>

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

**K1**- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

### EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS	
C1	C2	C3	C4	C5	C6	CIA	ESE
10	10	5	5	5	5	40	60

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non - Scholastic

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Illustrate a basic motif.	K2, K4	PSO9
CO 2	Recognize the basic hand stitches and prepare samples.	K1	PSO9
CO 3	Choose and apply appropriate embroidery stitches on various products.	K1, K3	PSO9 & PSO17
CO 4	Describe different methods of painting on fabrics.	K1	PSO9
CO 5	Plan the fabric painting technique for clothing and household linen.	K3	PSO9 & PSO17

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	3	1	1	1
CO2	1	1	1	1	1	1	1	1	3	1	1	1
CO3	1	1	1	1	1	1	1	1	3	1	1	1
CO4	1	1	1	1	1	1	1	1	3	1	1	1
CO5	1	1	1	1	1	1	1	1	3	1	1	1
CO/ PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	

PSO	13	14	15	16	17	18	19	20	21	22	23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	3	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	3	1	1	1	1	1	1	

### Mapping of COs with POs


CO/ PSO	P01	P02	P03	P04
CO1	1	1	2	1
CO2	1	1	2	1
CO3	1	1	2	1
CO4	1	1	2	1
CO5	1	1	2	1

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦  
Weakly Correlated -1

### COURSE DESIGNER:

1. Dr.R.Latha
2. Ms.D.Mouna

**Forwarded By**



(Dr.Vasantha Esther Rani)

## II B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

### SEMESTER – III

*For those who joined in 2021 onwards  
(Offered as Interdisciplinary Course with Home Science)*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAZO	21UG4SLZ	PUBLIC HEALTH & HYGIENE	Self Learning	-	2

#### COURSE DESCRIPTION

The course is designed to introduce life threatening medical scenarios and to instruct the student how to recognize and respond appropriately to each given situation.

#### COURSE OBJECTIVES

- To recognize and avoid hazards within her or environment.
- To develop skills necessary for immediate and temporary care care of victims of various cases.

#### UNITS

##### UNIT I - NUTRITION AND HEALTH

Role of international health organization: WHO – UNICEF. Concept of health, Indicators of health. Importance of Nutrition. Nutritional requirements for the special groups (pregnant mother, lactating mother and children). Protein calorie Malnutrition (PCM), National nutrition programme.

##### UNIT II: ENVIRONMENT AND HEALTH

Water borne diseases – types, symptoms and treatment. Purification of water - large scale for drinking purpose (slow sand and rapid sand filtration methods). Chlorination of well water. Sanitation. Excreta - Methods of disposal - types of latrines. National health programmes in India.

##### UNIT III: COMMUNICABLE AND NON COMMUNICABLE DISEASE

Epidemiology of Communicable disease- prevention and control -Diarrhoeal diseases- Zoonoses -Viral hemorrhagic fevers - Primary infections of the brain- Mycobacterial infections- Emerging

disease threats- Severe Acute Respiratory Syndrome (SARS) and Avian flu- Dengue, Swine, Flu, Chikungunya. Epidemiology, prevention and control of noncommunicable diseases- Rheumatic heart disease- Infective endocarditis- Ischaemic heart disease- Respiratory diseases - Program related to Communicable and Non Communicable diseases

#### UNIT IV: FAMILY PLANNING, MATERNAL AND CHILD HEALTH

Family Planning - Objectives and methods - temporary and permanent methods. Maternal Mortality Rate (MMR) - Causes and prevention. Infant Mortality Rate (IMR) - Causes and prevention. Problems of the aged Geriatrics. Immunization schedule for children.

#### UNIT V: FIRST AID

Heart attack - Fire accident – Accident – Injuries- Fractures – Stroke- Poison- Electric Shock - Gas leakage - Snake bite and Dog bite

#### REFERENCE BOOKS

1. Park J.E., (2017). *Textbook Of Preventive Social Medicine* 24 Th Edition. BanarsidasBhanot Publishers.
2. Vidhya R., (2002). *Hand Book of Preventive and Social Medicine*. **Publisher:** JPB; Ninth edition
3. Sudhar R., Wagh P., Vinod B., Kakade, Jiwan P.S., (2015). *Public Health And Hygiene* Paperback – 2015. Success Publications; First Edition edition (2015).
4. Kumaresan, V., Sorna Raj R., *Public Health and Hygiene*. Saras Publication
5. Paho, Padro N.A., (2003). *Zoonoses and Communicable Diseases Common to Man and Animals* (PAHO Scientific Publications S.) 2003. World Health Organization; 3rd Revised edition edition.

#### Digital Open Educational Resources

1. <https://www.healthline.com/health/food-nutrition>
2. <https://www.who.int/health-topics/nutrition>
3. <https://www.healthline.com/health/first-aid>

#### EVALUATION

Internal	External
Assignment – 20 Marks	Objective – 20 Marks
Test – 20Marks	Essay Type Qns. – 40 Marks
Total – 40Marks	Total – 60Marks



**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Discuss the importance, requirement of nutrition for Mother and children	K2	PSO1, PSO4 & PSO11
CO 2	Summarizes about types water borne disease and its remedies	K2	PSO1, PSO4
CO 3	Explain the temporary and permanent methods of family planning	K2	PSO1, PSO4 & PSO8
CO 4	Outlines the types of maternity problems and child health	K2	PSO1 & PSO8
CO 5	Explain the first aid for major health problems	K2	PSO1, PSO3 & PSO4

**Mapping COs Consistency with PSOs**

CO/ PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9	PSO10	PSO11	PSO12
CO1	3			3							1	
CO2	3			3								
CO3	3			3				1				
CO4	1							1				
CO5	2		2	3								

**Note:** ♦ Strongly Correlated – 3  
Weakly Correlated -1


♦ Moderately Correlated – 2

♦

1. Dr. N. Nagarani (Zoology)

2. Mrs. C. Helen (Home Science)

**Forwarded By**

  
**Dr. A. TAMIL SELVI**  
Head, Dept. of Zoology  
**FATIMA COLLEGE (AUTONOMOUS)**  
MADURAI-625 018

**HOD'S**

**Signature**

**& Name**

**IIB.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY SEMESTER –IV**

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N4CC10	BASICS OF FOOD BIOTECHNOLOGY	Lecture	5	4

**COURSE DESCRIPTION**

This course describes the concepts of biotechnology, role of microorganism in food industry

**COURSE OBJECTIVES**

- To enable students to understand the concepts of biotechnology
- To gain knowledge on role of microorganism in food industry

**UNITS****UNIT -I INTRODUCTION****(15HRS.)**

Biotechnology –Definitions – Branches - Biotechnology in India.  
Food Biotechnology - Scope, Importance and applications in fields of medicine, agriculture, industry and environment. Microorganisms associated with food biotechnology – Bacteria, Yeast, Mould  
**Self- Study: Applications in fields of medicine, agriculture**

**UNIT -II MICROORGANISMS ASSOCIATED WITH FOOD****BIOTECHNOLOGY****(15 HRS.)**

Spoilage, contamination and preservation of foods  
Factors affecting microbial growth, Microbial kinetics

**UNIT -III PRODUCTION OF CULTURES FOR FOOD FERMENTATION****(15HRS.)**

Culture of food microbes - Preparation of nutrient media, Sterilization and disinfection, inoculation techniques, Staining methods, Microbial examination.

**UNIT -IV FERMENTATION TECHNOLOGY****(15 HRS.)**

Fermentation – Definition, Fermentation process, Fermented food Products – Yoghurt, Cheese, Tempeh, saurkraut, Idli, Dosa. Advantages of fermented products

**Self-Study: Advantages of fermented products**

**UNIT -V SINGLE CELL PROTEIN****(15HRS.)**

Single cell Protein: Definition, Microorganisms used for SCP production, Substrates, procedure for production of SCP, Biomass recovery, Advantages of SCP, Limitations of SCP.

#### REFERENCES:

#### TEXTBOOK:

1. Frazier, (1989) *Food Microbiology*, THM Publications

#### REFERENCE BOOKS:

1. Gupta, P.K. (1995). *Elements of Biotechnology*, Rastogi Publications, Meerut.
2. Jay, (1987). *Modern Food Microbiology*, CBS Publishers,
3. Rita Singh. ( 2004). *Food Biotechnology*, Global Vision Publishing House, Delhi.
4. Singh, B. D (2004). *Biotechnology Expanding Horizons*, Kalyani Publishers, Ludhiana.
5. Sri Ram Sridhar (2005). *Enzyme Biotechnology*, Dominant Publishers and Distributors, New Delhi.

#### OPEN EDUCATIONAL REFERENCES

1. <https://microbenotes.com/category/biotechnology/>
2. <https://www.rug.nl/research/irees/research/edulink-fsba/fsba-course-modules/fsba-module-2-unit-1-notes-english.pdf>
3. <https://www.onlinebiologynotes.com/single-cell-protein-scp-substrate-and-steps-involved-in-production/>
4. <https://openstax.org/books/microbiology/pages/1-3-types-of-microorganisms#>
5. <https://courses.lumenlearning.com/boundless-microbiology/chapter/food-preservation/#:~:text=Preservation%20usually%20involves%20preventing%20the,or%20otherwise%20reduce%20food%20spoilage.>
6. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6723656/>
7. <https://courses.lumenlearning.com/boundless-microbiology/chapter/microbial-culture-methods/>

#### COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT 1 - BIOTECHNOLOGICAL APPROACHES IN FOOD PROCESSING</b>				
1.1	Biotechnology – Definitions – Branches	2	Chalk & Talk	Black Board
1.2	Biotechnology in India.	2	Chalk & Talk	LCD
1.3	Food Biotechnology - Scope, Importance and applications in fields of medicine, agriculture, industry and environment	4	Lecture	PPT & White board
1.4	Microorganisms associated with food biotechnology – Bacteria	3	Lecture	Smart Board
1.5	Microorganisms associated with food biotechnology – Yeast, Mould	2	Lecture	Black Board
1.6	Applications of Biotechnology	2	Discussion	Google classroom
<b>UNIT -2 BASICS OF MICROBIOLOGY</b>				
2.1	Spoilage and contamination of foods	4	Lecture	LCD

2.2	Preservation of foods	4	Chalk & Talk	LCD
2.3	Factors affecting microbial growth	4	Lecture	PPT & White board
2.4	Microbial kinetics	3	Discussion	PPT
<b>UNIT -3 PRODUCTION OF CULTURES FOR FOOD FERMENTATION</b>				
3.1	Culture of food microbes - Preparation of nutrient media	3	Lecture	LCD
3.2	Sterilization and disinfection Methods	2	Lecture	LCD
3.3	Inoculation techniques.	4	Chalk & Talk	LCD
3.4	Staining methods	4	Lecture	PPT & White board
3.5	Microbial examination	2	Lecture	PPT & White board
<b>UNIT -4 FERMENTATION TECHNOLOGY</b>				
4.1	Fermentation – Definition	1	Lecture	LCD
4.2	Fermentation process – Types	4	Chalk & Talk	LCD
4.3	Fermented food Products – Yoghurt, Cheese	3	Lecture	PPT & White board

4.4	Tempeh, Saurkraut,	3	Lecture	PPT & White board
4.5	Idli, Dosa.	2	Chalk & Talk	LCD
4.6	Advantages of fermented products	2	Discussion	PPT
<b>UNIT -5 SINGLE CELL PROTEIN</b>				
5.1	Single cell Protein – Definition	1	Lecture	LCD
5.2	Microorganisms used for SCP production	3	Chalk & Talk	LCD
5.3	Substrates used for SCP production	3	Lecture	PPT & White board
5.4	procedure for production of SCP	4	Lecture	PPT & White board
5.5	Biomass recovery	2	Chalk & Talk	LCD
5.6	Advantages of SCP, Limitations of SCP.	2	Discussion	PPT



CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1	T2	Quiz	Assignment	OBT/PP T				
	10 Mks	10 Mks	5 Mks	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

CIA	
Scholastic	35
Non Scholastic	5
	40

✓ **All the course outcomes are to be assessed in the various CIA components.**

✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:**

**K1- Remember, K2-Understand, K3-Apply, K4-Analyse**

## **EVALUATION PATTERN**

<b>SCHOLASTIC</b>					<b>NON - SCHOLASTIC</b>	<b>MARKS</b>		
<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>CIA</b>	<b>ESE</b>	<b>Total</b>
<b>10</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>40</b>	<b>60</b>	<b>100</b>

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non – Scholastic

**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Define the concepts of biotechnology, its branches and scope	K1	PSO5
CO 2	Classify the food microorganism, Identify the factors affecting the microbial growth, explain spoilage and contamination of foods, identify the methods of preservation of foods	K2, K3	PSO5
CO 3	Explain the techniques of preparation of culture media, sterilization, inoculation and staining	K2	PSO5
CO 4	Build knowledge on fermentation process and its application	K3	PSO5
CO 5	Infer the production of single cell protein	K4	PSO5

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	3	1	1	1	1	1	1	1
CO2	1	1	1	1	3	1	1	1	1	1	1	1
CO3	1	1	1	1	3	1	1	1	1	1	1	1

## CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

<b>CO4</b>	1	1	3	1	3	1	1	1	1	1	1	1
<b>CO5</b>	1	1	3	1	3	1	1	1	1	1	1	1
<b>CO/ PSO</b>	<b>PSO 13</b>	<b>PSO 14</b>	<b>PSO 15</b>	<b>PSO 16</b>	<b>PSO 17</b>	<b>PSO 18</b>	<b>PSO 19</b>	<b>PSO 20</b>	<b>PSO 21</b>	<b>PSO2 2</b>	<b>PSO2 3</b>	
<b>CO1</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO2</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO3</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO4</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO5</b>	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

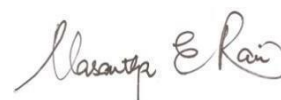
<b>CO/ PSO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>
<b>CO1</b>	1	1	1	1
<b>CO2</b>	3	3	3	1
<b>CO3</b>	3	3	3	1
<b>CO4</b>	3	3	3	1
<b>CO5</b>	3	3	3	1

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2

♦ Weakly Correlated -1

**COURSE DESIGNER:**  
**Mrs.J.JosephineJesintha**

**Forwarded By**



(Dr.Vasantha Esther Rani)

## II.B.Sc.HOME SCIENCE WITH FOOD BIOTECHNOLOGY

### SEMESTER –IV

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N4CC11	CLOTHING AND FASHION	Lecture	4	3

#### COURSE DESCRIPTION

This course aims at imparting knowledge on basics of clothing construction, clothing selection, care and wardrobe planning. It also deals with fashion industry, fashion promotion and fashion illustration.

#### COURSE OBJECTIVES:

- To enable students to develop skills in clothing construction and care of clothes.
- To introduce the concept of fashion.
- To develop fashion sketching techniques.

#### UNITS

#### UNIT –1 BASICS OF CLOTHING CONSTRUCTION

**(10 HRS.)**

- a) Preparation of fabric,
- b) Techniques of patterns making – drafting, draping and flat pattern
- c) Pattern layout.

**Self- Study: Importance of body measurement**

#### UNIT –II CLOTHING SELECTION, CARE AND WARDROBE PLANNING

**(15HRS.)**

1. Wardrobe planning – principles, clothing inventory, spending plan,

shopping skill and accessories.

2. Water – hardness, methods of softening.
3. Soaps and detergents
4. Bleaching agents
5. Dry cleaning.

**Self- Study: Factors influencing the choice of clothes – age, sex, income, family size, occupation, customs and tradition, climate, fashion, occasion and suitability.**

### **UNIT –III INTRODUCTION TO FASHION**

**(10 HRS.)**

- a) Definition of Fashion, Style Classic, Fad.
- b) Terms related to fashion industry – Mannequin, Boutique, Fashion shows, Apparel, Catalogue, Haute Couture, forecasting.
- c) Fashion – origin, concept, fashion cycle and trends.

### **UNIT –IV FASHION INDUSTRY AND FASHION PROMOTION**

**(10 HRS.)**

- a) Structure of the Fashion industry
- b) Structure of the Fashion market
- c) Techniques for fashion promotion – fashion advertising, fashion conferences, trade fairs, Exhibition, fashion shows, fashion journalism and window display.

### **UNIT –V FASHION ILLUSTRATION**

**(15 HRS.)**

- a) Elements and Principles of design
  - b) Designing casual wear using templates
  - c) Designing party wear using templates
  - d) Designing kids wear using templates

**REFERENCES:****TEXTBOOK:**

1. Erwin, M.D. (1975). Clothing for Moderns. The Mac Millan Company, New York.

**REFERENCE BOOKS**

1. Anne Allen & Julian Seaman. (2005). Fashion Drawing – The Basic Principles. Replika Press Pvt. Ltd, India
2. Gini Stephens Frings. (2005). Fashion – From Concept to Consumer. Pearson Education.
3. Jay Diamond & Ellen Diamond. (1997). The World of Fashion. Fair Child Publications, New York.
4. Mary Mathews. (1985). Practical Clothing Construction Part I and II. Chennai.
5. Retu, T. (1998). Hand book for Fashion Designing. Mittal Publications, New Delhi.
6. Sharon Lee Tate. (2004). Inside Fashion Design. Pearson Education.
7. Tracy Diane & Tom Cassidy. (2005). Colour Forecasting. Blackwell Pub

**OPEN EDUCATIONAL RESOURCES:**

1. <https://fitnyc.libguides.com/fashiondesign/patternmaking>
2. [http://metalab.uniten.edu.my/~ridha/PrinCiplesOf\\_Design/references/Elements-and-Principles-of-Design.pdf](http://metalab.uniten.edu.my/~ridha/PrinCiplesOf_Design/references/Elements-and-Principles-of-Design.pdf)

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 BASICS OF CLOTHING CONSTRUCTION</b>				
1.1	Preparation of fabric	3	Chalk & Talk	Black Board
1.2	Techniques of pattern making- drafting, draping and flat pattern	4	Chalk & Talk	Black Board

1.3	Pattern layout	3	Lecture	PPT
<b>UNIT – 2 CLOTHING SELECTION, CARE AND WARDROBE PLANNING</b>				
2.1	Wardrobe planning	4	Lecture, Discussion	PPT
2.2	Water	3	Chalk & Talk	Black Board
2.3	Soaps and detergents	3	Chalk & Talk, Specimen	Black Board
2.4	Bleaching agents	2	Chalk & Talk	Black Board
2.5	Drycleaning	3	Chalk & Talk	Black Board
<b>UNIT – 3 INTRODUCTION TO FASHION</b>				
3.1	Definition of Fashion, Style, Classic, Fad	3	Lecture	PPT
3.2	Mannequin, Boutique, Fashion shows, Apparel, Catalogue, Haute Couture, Forecasting	3	Chalk & Talk	Black Board
3.3	Fashion – Origin, concept, fashion cycle and trends	4	Lecture	PPT
<b>UNIT – 4 FASHION INDUSTRY AND FASHION PROMOTION</b>				
4.1	Structure of the fashion industry	3	Chalk & Talk	Black Board



4.2	Structure of the fashion market	3	Chalk & Talk	Black Board
4.3	Techniques for fashion promotion	4	Lecture	PPT
<b>UNIT – 5 FASHION ILLUSTRATION</b>				
5.1	Elements and Principles of design	3	Lecture	PPT
5.2	Designing Casual wear	4	Discussion, Specimen	PPT
5.3	Designing party wear	4	Discussion, Specimen	PPT
5.4	Designing kids wear	4	Discussion, Specimen	PPT

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1	T2	Quiz	Assignment	OBT/PP T				
	10 Mks	10 Mks	5 Mks	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %

<b>K4</b>	3	3	-	5	-	11	-	11	27.5 %
<b>Non Scholastic</b>	-	-	-	-	-		5	5	12.5 %
<b>Total</b>	10	10	5	5	5	35	5	40	100 %

<b>CIA</b>	
<b>Scholastic</b>	<b>35</b>
<b>Non Scholastic</b>	<b>5</b>
	<b>40</b>

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

**K1**- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

### EVALUATION PATTERN

<b>SCHOLASTIC</b>					<b>NON – SCHOLASTIC</b>	<b>MARKS</b>		
<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>CIA</b>	<b>ESE</b>	<b>Total</b>
<b>10</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>40</b>	<b>60</b>	<b>100</b>

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment**C5** - OBT/PPT**C6** – Non - Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Identify the different techniques of pattern making and pattern layout.	K1, K3	PSO9
CO 2	Explain the principles of wardrobe planning and factors to be remembered in the selection of clothes.	K2	PSO9
CO 3	Summarize the laundering agents.	K2	PSO9
CO 4	Recall the terms related to fashion industry, fashion cycle and fashion trends.	K1	PSO9
CO 5	Describe the structure of fashion industry, fashion market and fashion promotion techniques.	K2	PSO9
CO 6	Illustrate and apply elements and principles of design on casual wear, party wear and kids wear.	K2, K4	PSO9 & PSO17

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO1 0	PSO1 1	PSO 12
CO1	1	1	1	1	1	1	1	1	3	1	1	1
CO2	1	1	1	1	1	1	1	1	3	1	1	1
CO3	1	1	1	1	1	1	1	1	3	1	1	1
CO4	1	1	1	1	1	1	1	1	3	1	1	1
CO5	1	1	1	1	1	1	1	1	3	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

CO/ PSO	P01	P02	P03	P04
CO1	1	1	1	2
CO2	1	1	1	2
CO3	1	1	1	2
CO4	1	1	1	2
CO5	1	1	1	2

**Note:**   ♦ Strongly Correlated – 3                    ♦ Moderately Correlated – 2  
             ♦ Weakly Correlated -1

**COURSE DESIGNER:**  
**Dr.R.Latha**

**Forwarded By**



(Dr.Vasantha Esther Rani)

## II B.Sc.HOME SCIENCE WITH FOOD BIOTECHNOLOGY

### SEMESTER –IV

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N4CC12	CLOTHING AND FASHION - LAB	Practical	3	2

#### COURSE DESCRIPTION

This course makes the students to become skillful in constructing garments and creating fashion sketches.

#### COURSE OBJECTIVES

- To impart skill in drafting and construction of garments.
- To train students in fashion illustration.

#### UNITS

##### UNIT –I (12 HRS.)

Drafting paper pattern and construction of

(i) Baby's Night Gown

(ii) Six Gore Saree petticoat

##### UNIT –II (12 HRS.)

Drafting paper pattern and construction of

(i) Nighty

(ii) Salwar Kameez

##### UNIT –III (7 HRS.)

Drawing flesh figure using 8 head theory.

##### UNIT –IV (7 HRS.)

Drawing shoes, handbags, hats and hairstyles.

## UNIT –V

(7 HRS.)

Developing sketches based on themes

### REFERENCE BOOKS:

1. Anne Allen & Julian Seaman. (2005). Fashion Drawing – The Basic Principles. Replika Press Pvt. Ltd, India
2. Gini Stephens Frings. (2005). Fashion – From Concept to Consumer. Pearson Education.
3. Jay Diamond & Ellen Diamond. (1997). The World of Fashion. Fair Child Publications, New York.
4. Mary Mathews. (1985). Practical Clothing Construction Part I and II. Chennai.
5. Retu, T. (1998). Hand book for Fashion Designing. Mittal Publications, New Delhi.
6. Sharon Lee Tate. (2004). Inside Fashion Design. Pearson Education.
7. Tracy Diane & Tom Cassidy. (2005). Colour Forecasting. Blackwell Pub

### OPEN EDUCATIONAL RESOURCES:

1. <https://fitnyc.libguides.com/fashiondesign/patternmaking>
2. <http://metalab.uniten.edu.my/~ridha/PrinCiplesOf Design/referenc es/Elements-and-Principles-of-Design.pdf>

## COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1</b>				
1.1	Drafting of Baby's Night Gown	3	Chalk & Talk	Black Board
1.2	Construction of Baby's Night Gown	3	Demonstration	Sewing Machine
1.3	Drafting of Saree Petticoat	3	Chalk & Talk	Black Board

1.4	Construction of Saree Petticoat	3	Demonstration	Sewing Machine
<b>UNIT – 2</b>				
2.1	Drafting of Nighty	3	Chalk & Talk	Black Board
2.2	Construction of Nighty	3	Demonstration	Sewing Machine
2.3	Drafting of Salwar Kameez	3	Chalk & Talk	Black Board
2.4	Construction of Salwar Kameez	3	Demonstration	Sewing Machine
<b>UNIT – 3</b>				
3.1	Drawing flesh figure using * head theory	7	Demonstration	Black Board
<b>UNIT – 4</b>				
4.1	Drawing shoes, hand bags	4	Demonstration	Black Board
4.2	Drawing hats and hairstyles	3	Demonstration	Black Board
<b>UNIT – 5</b>				
5.1	Developing sketches based on themes – festive occasions	3	Lecture	PPT



5.1	Casual wear, party wear, executive wear using elements and principles of design	4	Lecture	PPT
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**EVALUATION PATTERN**

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test - 1**C2** – Internal Test - 2**C3** – Model Practical Exam**C4** – Record**C5** – Non – Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Construct baby garment and saree petticoat.	K3	PS09
CO 2	Plan drafting and construct nighty and salwar kameez.	K3	PS09

CO 3	Build flesh figure using 8 head theory.	K3	PSO9
CO 4	Choose and draw different hairstyles and accessories.	K1, K3	PSO9 & PSO17
CO 5	Illustrate casual wear, party wear and festive wear based on themes.	K2, K4	PSO9 & PSO17

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	3	1	1	1
CO2	1	1	1	1	1	1	1	1	3	1	1	1
CO3	1	1	1	1	1	1	1	1	3	1	1	1
CO4	1	1	1	1	1	1	1	1	3	1	1	1
CO5	1	1	1	1	1	1	1	1	3	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	3	1	1	1	1	1	1	
CO5	1	1	1	1	3	1	1	1	1	1	1	

### Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4
CO1	1	1	1	3
CO2	1	1	1	3
CO3	1	1	1	3
CO4	1	1	1	3
CO5	2	1	1	3

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

**COURSE DESIGNER:**

**1.Dr.R.Latha**

**2. Ms.J.JosephineJesintha**

**Forwarded By**



(Dr.Vasantha Esther Rani)

## II B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

### SEMESTER –IV

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N4AC3	FOOD PRODUCTION AND SERVICE	Lecture	3	3

#### COURSE DESCRIPTION

This course provides knowledge on the production of food in different styles and the service procedure.

#### COURSE OBJECTIVES

- To understand the concept of Catering and Food Production.
- To learn different types of cuisine and service types.

#### UNITS

##### UNIT –I CLASSIFICATION OF RAW MATERIALS (9HRS.)

Aims and objectives of cooking Food – Classification of Raw Materials

**Self -study: Pre preparation of Ingredients – Methods of mixing Foods – cooking methodology for Indian, Continental and Chinese Cookery.**

##### UNIT –II SOUPS, SAUCES AND SALADS (9 HRS.)

Stocks and Sauces -Definition, Types of stocks and Roux

Derivatives- Soups and Sauces- Types of soups and sauces

Salads -- Definition, classification and preparation- Recipes for simple and compound salads, salad Dressings –Preparation of Salad Dressing.

##### UNIT –III STANDARDIZATION AND MENU PLANNING (9 HRS.)

Selection procedures for Meat (pork, mutton, Beef), Poultry, Fish, Cuts of Meat, Poultry, Fish.

Standardization of recipes, quality standards and portion control, Utilization of left over.

Menu – Definition, Types of menus, Menu planning

#### **UNIT –IV FOOD AND BEVERAGE SERVICE (9HRS.)**

Food and Beverage Service – Introduction, Definition, various outlets for food and beverage services.

Type of service - Russian, French, English and Indian, Etiquettes of service staff. Qualities of a waiter, waiting at the table. Table setting – buffet setting. Table wares -Crockery, cutlery and hollow wares. Napkin folding.

#### **UNIT –V MANAGEMENT OF FOOD AND BEVERAGE PRODUCTION**

#### **DEPARTMENT (9 HRS.)**

Management for food and beverage of food production department– Principle and functions of management. Organizational chart,Tools of management.

#### **REFERENCES:**

#### **TEXTBOOK:**

1. Andrews.S (1982). *Food and Beverage Service Training Manual* , Tata McGraw Hill, New Delhi,

#### **REFERENCE BOOKS:**

1. Jitendar ,M.D.( 2000). *Catering Management*, Denumant Publication, New Delhi.
2. Jones&Merricks (1995). *The Management of Food Service operation*, Cassell Publication, London.
3. Sethi &Mathan.(1997).*Catering Management* – An integration approach, New Age International, Chennai,
4. Thangam Phillip (1992). *Modern cookery*, Orient Longman, Mumbai,

#### **OPEN EDUCATIONAL RESOURCES:**

1. <http://www.cocktailtimes.com>
2. <http://www.Food and beverages skills.org>
3. <http://www.wpi.edu/Pubs/E-project/Available/E-project-031405-135846/unrestricted/IQP.pdf>
4. [http://www.sciencedaily.com/articles/t/transgenic\\_plants.htm](http://www.sciencedaily.com/articles/t/transgenic_plants.htm)
5. <https://ncert.nic.in/textbook/pdf/lehe104.pdf>
6. <https://drive.google.com/file/d/1mrFlogclLZqR1VLDsqI4ikqvTI2sOB8n/view>
7. <https://www.ihmnotessite.net/front-office>
8. <https://www.ihmnotessite.net/accomodation>

**COURSE CONTENTS & LECTURE SCHEDULE:**

<b>Module No.</b>	<b>Topic</b>	<b>No. of Lectures</b>	<b>Teaching Pedagogy</b>	<b>Teaching Aids</b>
<b>UNIT -1 CLASSIFICATIONOF RAW MATERIALS</b>				
1.1	Aims and objectives of cooking Food	1	Chalk & Talk	Black Board
1.2	Classificationof Raw Materials	2	Chalk & Talk	LCD
1.3	Pre preparation of Ingredients	2	Lecture	PPT & White board
1.4	Methods of mixing Foods	2	Lecture	Smart Board
1.5	Cooking methodology for Indian, Continental and Chinese Cookery.	2	Lecture	Black Board
<b>UNIT -2 SOUPS, SAUCES AND SALADS</b>				
2.1	Stocks and Sauces - Definition, Types of stocks and Roux	1	Lecture	Black Board
2.2	Derivatives- Soups and Sauces- Types of soups and sauces	1	Chalk &Talk	Green Board
2.3	Types of sauces	2	Chalk & Talk	LCD
2.4	Salads -- Definition, classification and preparation	1	Lecture	PPT & White board

2.5	Recipes for simple and compound salads	2	Lecture	Smart Board
2.6	salad Dressings –Preparation of Salad Dressing.	2	Chalk & Talk	Black Board
<b>UNIT -3STANDARDIZATION AND MENU PLANNING</b>				
3.1	Selection procedures for Meat (pork, mutton, Beef), Poultry, Fish	2	Chalk & Talk	Black Board
3.2	Cuts of Meat, Poultry, Fish.	1	Chalk & Talk	LCD
3.3	Standardization of recipes,	2	Lecture	PPT & White board
3.4	Quality standards and portion control	1	Lecture	Smart Board
3.5	Utilization of left over	1	Lecture	Black Board
3.6	Menu – Definition, Types of menus, Menu planning.	2	Lecture	PPT & White board
<b>UNIT –IV FOOD AND BEVERAGE SERVICE</b>				
4.1	Food and Beverage Service – Introduction, Definition	1	Chalk & Talk	Black Board
4.2	various outlets for food and beverage services.	1	Chalk & Talk	LCD
4.3	Type of service - Russian, French, English and Indian,	1	Lecture	PPT & White

				Board
4.4	Etiquettes of service staff	1	Lecture	Smart Board
4.5	Rules for waiting at the table	2	Lecture	Black Board
4.6	Table setting – buffet setting	1	Discussion	LCD
4.7	Table wares -Crockery, cutlery and hollow wares.	1	Chalk & Talk	LCD
4.8	Napkin folding	1	Chalk & Talk	LCD
<b>UNIT –V MANAGEMENT OF FOOD AND BEVERAGE PRODUCTION DEPARTMENT</b>				
5.1	Management for food and beverage of food production department	1	Chalk & Talk	Black Board
5.2	Principles of management	2	Chalk & Talk	LCD
5.3	functions of management	2	Lecture	PPT & White board
5.4	Organizational chart of management	2	Lecture	Smart Board
5.5	Tools of management.	2	Lecture	Black Board



CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1	T2	Quiz	Assignment	OBT/PP T				
	10 Mks .	10 Mks .	5 Mks .	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks .	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

CIA	
Scholastic	35
Non Scholastic	5
	40

✓ All the course outcomes are to be assessed in the various CIA components.

✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:**

**K1**- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

## EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non - Scholastic

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
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CO 1	Recall the methods of cooking	K1	PSO7
CO 2	Plan and prepare different types of soups and salads	K3	PSO7
CO 3	Describe the selection procedure for flesh foods	K2	PSO7
CO 4	Categorize different styles of food services	K4	PSO7
CO 5	Explain the organization and management process in hotel industry	K2	PSO7

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	3	1	1	1	1	1
CO2	1	1	1	1	1	1	3	1	1	1	1	1
CO3	1	1	1	1	1	1	3	1	1	1	1	1
CO4	1	1	1	1	1	1	3	1	1	1	1	1
CO5	1	1	1	1	1	2	3	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	

<b>CO5</b>	1	1	1	1	1	1	1	1	1	1	1	
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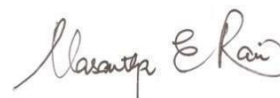
**Mapping of COs with POs**

<b>CO/ PSO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>
<b>CO1</b>	1	1	1	3
<b>CO2</b>	1	1	1	3
<b>CO3</b>	1	1	1	3
<b>CO4</b>	1	1	1	3
<b>CO5</b>	1	1	1	3

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦  
Weakly Correlated -1

**COURSE DESIGNER:**

- 1. Dr.S.Shanthi**
- 2. Mrs.J.JosephineJesintha**

**Forwarded By**


(Dr.Vasantha Esther Rani)

## II B.Sc.HOME SCIENCE WITH FOOD BIOTECHNOLOGY

### SEMESTER –IV

*For those who joined in 2019 onwards*

PROGRA MME CODE	COURSE CODE	COURSE TITLE	CATEGO RY	HRS/WEEK	CREDITS
UAHS	19N4AC4	FOOD PRODUCTION AND SERVICE LAB	Practical	2	2

#### COURSE DESCRIPTION

This practical course develops the skills on the production and service of the food.

#### COURSE OBJECTIVES

- To acquire the skill on planning the course menu
- To prepare the food on various styles

#### UNITS

##### FOOD PREPARATION

**UNIT –I** Preparation of soups, salads and desserts (6 HRS.)

**UNIT –II** Main dish (Indian, Continental and Chinese) (6HRS.)

**UNIT –III** Side dish (Indian, Continental and Chinese (6 HRS.)

**UNIT –IV** Course menu (6 HRS.)

##### FOOD SERVICE

**UNIT -V** Types of service, Cover laying, Table setting and

Napkin folding (6 HRS.)

#### REFERENCE BOOKS:

1. Jitendar ,M.D.( 2000). *Catering Management*, Denumant Publication, New Delhi.

2. Jones & Merricks (1995). *The Management of Food Service operation*, Cassell Publication, London.
3. Sethi & Mathan. (1997). *Catering Management – An integration approach*, New Age International, Chennai,
4. Thangam Phillip (1992). *Modern cookery*, Orient Longman, Mumbai,

**OPEN EDUCATIONAL RESOURCES:**

- a) <http://www.cocktailtimes.com>
- b) <http://www.Food and beverages skills.org>
- c) <http://www.wpi.edu/Pubs/E-project/Available/E-project-031405-135846/unrestricted/IQP.pdf>
- d) 135846/unrestricted/IQP.pdf
- e) [http://www.sciencedaily.com/articles/t/transgenic\\_plants.htm](http://www.sciencedaily.com/articles/t/transgenic_plants.htm)

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT –I</b> Preparation of soups, salads and desserts				
1.1	<b>FOOD PREPARATION</b> Preparation of Soups	2	Hands on Training	White board
1.2	Preparation of Salads	2	Hands on Training	LCD & White board
1.3	Preparation of Desserts	2	Hands on Training	Demonstration
<b>UNIT –II</b> Main dish (Indian, Continental and Chinese)				
2.1	Topic2 Main dish (Indian)	2	Hands on Training	White board

2.2	Subtopics Main dish (Continental)	2	Hands on Training	White board
2.3	Main dish (Chinese)	2	Hands on Training	White board
<b>UNIT -III Side dish (Indian, Continental and Chinese)</b>				
3.1	Topic 3 Side dish (Indian)	2	Hands on Training	Demonstrati on
3.2	Subtopics Side dish (Continental)	2	Hands on Training	Demonstrati on
3.3	Side dish (Chinese)	2	Hands on Training	Demonstrati on
<b>UNIT -IV Course menu</b>				
4.1	Topic 4 Preparation of course Menu -Indian	2	Lecture & Hands on Training	White board
4..2	Subtopics Preparation of course Menu -Continental	2	Lecture & Hands on Training	Demonstrati on
4.3	Preparation of course Menu -Chinese	2	Lecture & Hands on Training	Demonstrati on
<b>UNIT -V Types of service, cover laying, table setting and napkin folding</b>				
5.1	Topic5 Types of service	3	Lecture & Hands on Training	LCD & White board

5.2	Subtopics Cover laying and table Setting	2	Hands on Training	Demonstrati on
5.3	Vegetable Carving and Napkin folding	1	Lecture	Demonstrati on

**EVALUATION PATTERN**

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test - 1**C2** – Internal Test - 2**C3** – Model Practical Exam**C4** – Record**C5** – Non – Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	<b>COURSE OUTCOMES (CO)</b>  Plan and prepare starters and desserts	K1,K2	PSO3 and PSO7



CO 2	Choose and prepare main dishes of different cuisines	K1, K2,	PSO3 and PSO7
CO 3	Identify and prepare suitable side dishes	K1, K3	PSO7
CO 4	Construct the course menu for Indian, Continental cuisine	K2, K3	PSO7
CO 5	Organize different types of service	K4, K2	PSO7

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	3	3	1	1	1	1	1
CO2	1	1	1	1	1	3	3	1	1	1	1	1
CO3	1	1	1	1	1	3	3	1	1	1	1	1
CO4	1	1	1	1	1	3	3	1	1	1	1	1
CO5	1	1	1	1	1	3	3	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

CO/ PSO	P01	P02	P03	P04
CO1	1	3	1	1
CO2	1	3	1	1
CO3	1	3	1	1
CO4	1	3	1	1
CO5	1	3	1	1

**Note:** ♦ Strongly Correlated – 3

♦ Moderately Correlated – 2

♦ Weakly Correlated -1

**COURSE DESIGNER:****Dr.S. Santhi****Forwarded By**


(Dr.Vasantha Esther Rani)

## II B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

### SEMESTER –IV

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N4SB2	ENTREPRENEURIAL SKILLS – CAD	Lecture / Practical	2	2

#### COURSE DESCRIPTION

This course imparts skill in designing fashion garments, texture mapping and application of suitable accessories and background using Fashion Studio software.

#### COURSE OBJECTIVES

- To train the students in drawing basic silhouettes.
- To impart skill in designing fashion garments.

#### UNITS

##### UNIT –I (10 HRS.)

Drawing basic silhouettes

##### Self- Study: Drawing accessories

##### UNIT –II (5 HRS.)

Texture mapping – introducing colours and designs

##### UNIT –III (5 HRS.)

Colour way studio

##### UNIT –IV (5 HRS.)

Introducing pleat and fold

##### UNIT –V (5 HRS.)

## Draping

**REFERENCE BOOKS**

1. Anne Allen & Julian Seaman. (2005). Fashion Drawing – The Basic Principles. Replika Press Pvt. Ltd, India.
2. Erwin, M.D. (1975). Clothing for Moderns. The Mac Millan Company, New York.
3. Gini Stephens Frings. (2005). Fashion – From Concept to Consumer. Pearson Education.
4. Jay Diamond & Ellen Diamond. (1997). The World of Fashion. Fair Child Publications, New York.
5. Mary Mathews. (1985). Practical Clothing Construction Part I and II. Chennai.
6. Retu, T. (1998). Hand book for Fashion Designing. Mittal Publications, New Delhi.

**OPEN EDUCATIONAL RESOURCES:**

<https://en.wikipedia.org/wiki/Textile>

<https://www.amazon.in/Spinning-Tillie-Walden-ebook/dp/B074ZGMTY2>

<https://www.textileebook.com/2019/04/principles-of-textile-finishing-asim-kumar-roy-choudhury.html>

<https://textilestudycenter.com/library/>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1</b>		<b>TITLE</b>		
1.1	Drawing basic silhouettes	1	Lecture	Fashion Studio Software
2.1	Texture mapping – introducing colours and	1	Lecture	Fashion Studio

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	Designs			Software
3.1	Colour way studio	4	Lecture	Fashion Studio Software
4.1	Introducing pleat and fold	1	Lecture	Fashion Studio Software
5.1	Draping	1	Lecture	Fashion Studio Software

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1	T2	Quiz	Assignment	OBT/PP T				
	10 Mks	10 Mks	5 Mks	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

CIA	
Scholastic	35
Non Scholastic	5
	40

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

### EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS	
C1	C2	C3	C4	C5	C6	CIA	ESE
10	10	5	5	5	5	40	60

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non – Scholastic

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Illustrate the basic silhouettes of garments.	K2, K4	PSO9 & PSO10
CO 2	Plan the colour and design based on the type of garment	K3	PSO10 & PSO17
CO 3	Identify the areas for the application of transparent effect	K1, K3	PSO10
CO 4	Choose appropriate pleat, fold and accessories	K1, K3	PSO10
CO 5	Organize the designed garment against a background	K3	PSO10

### Mapping of COs with PSOs

CO/ PSO	PSO 1		PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO10	PSO11	PSO12
CO1	1		1	1	1	1	1	1	1	3	3	1	1
CO2	1		1	1	1	1	1	1	1	1	3	1	1
CO3	1		1	1	1	1	1	1	1	1	3	1	1
CO4	1		1	1	1	1	1	1	1	1	3	1	1

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<b>CO5</b>	1		1	1	1	1	1	1	1	1	3	1	1
<b>CO/ PSO</b>	<b>PSO 13</b>		<b>PSO 14</b>	<b>PSO 15</b>	<b>PSO 16</b>	<b>PSO 17</b>	<b>PSO 18</b>	<b>PSO 19</b>	<b>PSO 20</b>	<b>PSO 21</b>	<b>PSO2 2</b>	<b>PSO2 3</b>	
<b>CO1</b>	1		1	1	1	1	1	1	1	1	1	1	
<b>CO2</b>	1		1	1	1	3	1	1	1	1	1	1	
<b>CO3</b>	1		1	1	1	1	1	1	1	1	1	1	
<b>CO4</b>	1		1	1	1	1	1	1	1	1	1	1	
<b>CO5</b>	1		1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with Pos**

<b>CO/ PSO</b>	<b>P01</b>	<b>P02</b>	<b>P03</b>	<b>P04</b>
<b>CO1</b>	1	1	3	1
<b>CO2</b>	3	1	3	1
<b>CO3</b>	2	1	3	1
<b>CO4</b>	3	1	3	1
<b>CO5</b>	3	1	3	1

**Note:** ♦ Strongly Correlated – 3

♦ Moderately Correlated – 2

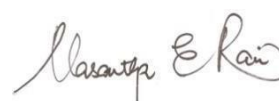
♦ Weakly Correlated -1

**COURSE DESIGNER:**

**1.Dr.R.Latha**

**2.Ms.J. JosephineJesintha**

**Forwarded By**



(Dr.Vasantha Esther Rani)



**SELF LEARNING INTERDISCIPLINARY COURSE****SEMESTER –IV**

**Offered by The Research Centre of Home Science and Department of Chemistry**

*(For those who joined in 2021 onwards)*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS Self Learning		TextileColoration	21UG4SLNC	-	2

**COURSE DESCRIPTION**

This course enlightens the students on the textile fibres, dyes and the coloration process. It also deals with the application process of mordant and disperse dyes.

**COURSE OBJECTIVES**

**CO1:** To gain knowledge about textile fibres and dyes

**CO2:** To understand the textile coloration process

**CO3:** To develop familiarity with the machinery used for dyeing and the application process

**CO4:** To study the concept of mordant dyes and properties

**CO5:** To learn about disperse dyes and the process of dispersion

**UNITS****UNIT –I FIBRES AND DYES**

Classification of textile fibres, types of dyes, suitability to textile fibres.

**UNIT –II COLORATION PROCESS**

Stages of dyeing. Methods of dyeing fabrics: jet dyeing, jig dyeing, pad dyeing and beam dyeing.

**UNIT –III MACHINERY AND APPLICATION**

Machinery: Conical-pan-loose-stock machine, The Hussong machine, Package dyeing machine, The Winch dyeing machine.

Application process: Forces by which dye molecules are bound to fibre (i) ionic force (ii) hydrogen bonding (iii) van der Waals forces (iv) covalent chemical linkages

**UNIT –IV MORDANT DYES**

Introduction -Natural mordant dyes - Synthetic mordant dyes- structure and properties of Eriochrome Black A and Alizarin.

**UNIT –V DISPERSE DYES**

Introduction – Ion amines, disperse acetate dyes and solacet dyes - Chemical structure of disperse dyes- Dispersion process -Function of dispersing agents

**UNIT –VI DYNAMISM (Evaluation Pattern-CIA only)****REFERENCES:**

1. Shailaja D.Naik, Jacquie A Wilson, 'Surface Designing of Textile Fabrics', New Age International(P) Ltd; Publishers, New Delhi (2006)
- 2.P.V.Vidyasagar, 'Handbook of Textiles', Mittal Publications, New Delhi (1998)
3. SusheelaDhantyagi, 'Fundamentals of Textiles and their care', Orient Longman, New Delhi. (1991)
4. B.K.Sharma—Industrial Chemistry , Goel Publishing co,1997
5. R.Chatwal —Synthetic Dyes||-Himalayan Publishing House,1995
6. V.A.Shenai, Chemistry of Dyes and Principles of Dyeing.

**WEB REFERENCES:**

link.springer.com

[www.keycolour.net](http://www.keycolour.net)

[www.slideshare.net](http://www.slideshare.net)

textileinsight.blogspot.com

Britannica.com/topic/textile/dyeing-and-printing

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1</b>		<b>TITLE</b>		
<b>1.1</b>	<b>FIBRES AND DYES</b>	-	-	<b>MATERIALS GIVEN</b>
<b>2.1</b>	<b>COLORATION PROCESS</b>	-	-	<b>MATERIALS GIVEN</b>
<b>3.1</b>	<b>MACHINERY AND APPLICATION</b>	-	-	<b>MATERIALS GIVEN</b>

<b>4.1</b>	<b>MORDANT DYES</b>	-	-	<b>MATERIALS GIVEN</b>
<b>5.1</b>	<b>DISPERSE DYES</b>	-	-	<b>MATERIALS GIVEN</b>
<b>6.1</b>	<b>DYNAMISM</b>	-	-	<b>MATERIALS GIVEN</b>

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1	T2	Quiz	Assignment	OBT/PT				
	10 Mks.	10 Mks.	5 Mks.	5 Mks.	5 Mks.	35 Mks.	5 Mks.	40 Mks.	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

CIA	
Scholastic	35
Non Scholastic	5
	40

- ✓ All the course outcomes are to be assessed in the various CIA components.
- ✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :

**K1- Remember, K2-Understand, K3-Apply, K4-Analyse****EVALUATION PATTERN**

SCHOLASTIC					NON - SCHOLASTIC	MARKS	
C1	C2	C3	C4	C5	C6	CIA	ESE
10	10	5	5	5	5	40	60

**COURSE OUTCOMES****On the successful completion of the course, students will be able to:**

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Able to identify fibres and dyes	K2, K4	PSO9 & PSO10
CO 2	Plan the colouration process	K3	PSO10 & PSO17
CO 3	Choose appropriate application process	K1, K3	PSO10
CO 4	Identify physical properties of moderent dyes	K1, K3	PSO10
CO 5	Able to know the chemical structure of dyes	K3	PSO10

**Mapping of COs with PSOs**

CO/ PSO	PSO 1		PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
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<b>CO1</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>
<b>CO2</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
<b>CO3</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
<b>CO4</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
<b>CO5</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
<b>CO/ PSO</b>	<b>PSO 13</b>		<b>PSO 14</b>	<b>PSO 15</b>	<b>PSO 16</b>	<b>PSO 17</b>	<b>PSO 18</b>	<b>PSO 19</b>	<b>PSO 20</b>	<b>PSO 21</b>	<b>PSO 22</b>	<b>PSO 23</b>	
<b>CO1</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	
<b>CO2</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	
<b>CO3</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	
<b>CO4</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	
<b>CO5</b>	<b>1</b>		<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	

**Mapping of COs with Pos**

<b>CO/ PSO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>
<b>CO1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>
<b>CO2</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>
<b>CO3</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>1</b>
<b>CO4</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>
<b>CO5</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2      ♦ Weakly Correlated -1

**COURSE DESIGNER:**

**1.Dr.R.Latha**

**2.Dr.B.Vinsha**

*For those who joined in 2019 onwards*

PROGRA MME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/ WEEK	CREDITS
UAHS	19N5CC13	Creche and Preschool Management	Lecture	6	4

**Course Description:**

This course imparts a comprehensive theoretical knowledge on the management of crèche and preschool management

**Course Objectives:**

- To disseminate the knowledge on the theories of philosophers.
- To teach them the various type of Preschools.
- Enable them to learn the principles and curricula of the preschool

## **UNITS**

### **UNIT –I EARLY CHILDHOOD CARE AND DEVELOPMENT (16 HRS.)**

Importance of Children's Environment, Early childhood Care and Development.

**Self-Study: Psychological, Nutritional and Healthcare of Preschool Children**

### **UNIT –II CRECHE MANAGEMENT (18 HRS.)**

Need for crèche – a supportive Agency. Role of a care taker – planning activities for children, care of an infant – sleep, feeding, and hygienic aspects Prevention of accidents, special requirements – furniture, rooms, play equipment's and utensils

### **UNIT –III PRESCHOOL EDUCATION (18 HRS.)**

Preschool – Meaning, Objectives, Significance, Functions. Views of

educationists – Rousseau, Pestalozzi, Froebel, Dewey, Montessori

#### **UNIT –IV PRESCHOOL PROGRAMME**

**(18 HRS.)**

Preschool Programme- Principles involved, a day's schedule

Preschool curriculum – types – child controlled, teacher controlled, child teacher mutually controlled

#### **UNIT –V ORGANISATION OF A PRESCHOOL CENTRE**

**(20HRS.)**

Physical set up- building equipment, Play definition, importance of play.

Play equipment for preschool children, selection and maintenance

Preschool staff and personnel,

Records and reports maintained in preschool.

Self -Study: Home School relationship.

#### **REFERENCES:**

##### **TEXTBOOK:**

1. Chowdhry. A & Chowdhry. R, *Pre-school children – Development care and Education*, New Age International CP Limited, NAIP publishing, Chennai, 2002.

#### **REFERENCE BOOKS:**

1. Devadas R.P. & Jaya.N (1991), *Textbook of Child Development*, Macmillan India limited, India
2. Hurlock E. B, (2004). *Child Development*, (6<sup>th</sup> ed). McGraw Hill Inc., New York.
3. Moony S. G (2013). *Theories of childhood: an introduction* Dewey, Montessori, Erikson, Piaget, and Vygotsky, Trade paperback, USA.
4. Santrock J.W, (2014) *Child Development*, McGraw Hill Inc., New York.

#### **OPEN EDUCATIONAL RESOURCES:**

1. <https://libguides.humboldt.edu/openedu/cd>
2. <https://guides.skylinecollege.edu/oersbysubject/education>
3. <https://library.piercecollege.edu/oer/childdevelopment>



**COURSE CONTENTS & LECTURE SCHEDULE:**

<b>Module No.</b>	<b>Topic</b>	<b>No. of Lectures</b>	<b>Teaching Pedagogy</b>	<b>Teaching Aids</b>
<b>UNIT -1 EARLY CHILDHOOD CARE AND DEVELOPMENT</b>				
1.1	Topic 1 Importance of children's environment. Theory	8	Chalk & Talk	Black Board
1.2	Subtopic Early childhood care and development.	8	Chalk & Talk	LCD & White board
<b>UNIT -II CRECHE MANAGEMENT</b>				
2.1	Topic 2 Need for crèche – a supportive Agency. Role of a care taker.	3	Lecture	PPT& Black Board
2.2	Subtopic Planning activities for children.	3	Chalk & Talk	Green Board
2.3	Topic 3 Care of an infant – sleep, feeding, and hygienic aspects	3	Chalk & Talk	Black Board and PPT
2.4	Subtopics Prevention of accidents.	3	Chalk & Talk	LCD & White board
2.5	Special requirements – furniture, rooms.	3	Chalk & Talk	LCD & Smart Board
2.6	Play Equipment's and utensils	3	Lecture	PPT & White board

<b>UNIT –III PRESCHOOL EDUCATION</b>				
3.1	Topic 4 Preschool – Meaning, Objectives, Significance, Functions.	3	Chalk & Talk	Black Board
3.2	Subtopic Views of educationists – Dewey, Rousseau	3	Lecture	PPT& Black Board
3.3	Views of educationists – Pestalozzi,	3	Chalk & Talk	LCD & Smart Board
3.4	Views of educationists – Froebel	3	Chalk & Talk	Black Board
3.5	Views of educationists – Montessori	3	Chalk & Talk	Smart Board
3.6	Views of educationists – Mahatma Gandhi	3	Lecture	PPT & White board
<b>UNIT –IV PRESCHOOL PROGRAMME</b>				
4.1	Topic5 Preschool Programme- Principles involved	6	Lecture	Smart Board
4.2	Subtopics A day's schedule Music, Story, Creative activity, Games, Science Experience	6	Lecture	PPT
4..3	Preschool curriculum – types – child controlled, teacher controlled, child teacher mutually controlled	6	Chalk & Talk	LCD
<b>UNIT –V ORGANISATION OF A PRESCHOOL CENTRE</b>				
5.1	Topic 6 Physical setup – building and equipment	5	Lecture and Group Discussion	Models
5.2	Play equipment for preschool children - Selection and maintenance	5	Lecture	Green Board Charts

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5.3	Play Definition, Importance of play. Preschool staff and personnel	5	Lecture	Smart Board
5.4	Records and reports maintained in preschool	5	Lecture	Black Board

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholas tic Marks C6	CIA Total
Levels	T1  10 Mks.	T2  10 Mks.	Quiz  5 Mks.	Assignm ent  5 Mks	OBT/PPT  5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5
	40

**All the course outcomes are to be assessed in the various CIA components. The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :**

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

### **COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

<b>NO.</b>	<b>COURSE OUTCOMES</b>	<b>KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)</b>	<b>PSOs ADDRESSED</b>
CO 1	Understand the importance of children's environment and overall development of Pre-school children	K1, K2	PSO11&PSO13
CO 2	Express the views of educationists on Preschool Education	K1, K2,	PSO15
CO 3	Plan and conduct a preschool programme	K1, K3	PSO15 and 16
CO 4	Construct the administrative skills to organize a Creche and a Preschool	K2,K3 &K4	PSO15 and 16
CO 5	Build a skill in preparing various play equipment and teaching aids for Preschoolers	K2 & K4	PSO16

### **Mapping of COs with PSOs**

<b>CO / PSO</b>	<b>PSO 1</b>	<b>PSO 2</b>	<b>PSO 3</b>	<b>PSO 4</b>	<b>PSO 5</b>	<b>PSO 6</b>	<b>PSO 7</b>	<b>PSO 8</b>	<b>PSO 9</b>	<b>PSO 10</b>	<b>PSO 11</b>	<b>PSO 12</b>
<b>CO 1</b>	1	1	1	1	1	1	1	1	1	1	3	1
<b>CO</b>	1	1	1	1	1	1	1	1	1	1	1	1

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<b>2</b>												
<b>CO 3</b>	1	1	1	1	1	1	1	1	1	1	1	1
<b>CO 4</b>	1	1	1	1	1	1	1	1	1	1	1	1
<b>CO 5</b>	1	1	1	1	1		1		1	1	1	1
<b>CO / PS O</b>	<b>PSO 13</b>	<b>PSO 14</b>	<b>PSO 15</b>	<b>PSO 16</b>	<b>PSO 17</b>	<b>PSO 18</b>	<b>PSO 19</b>	<b>PSO 20</b>	<b>PSO 21</b>	<b>PSO 22</b>	<b>PSO 23</b>	
<b>CO 1</b>	3	1	3	1	1	1	1	1	1	1	1	
<b>CO 2</b>	1	1	1		1	1	1	1	1	1	1	
<b>CO 3</b>	1	1	3	3	1	1	1	1	1	1	1	
<b>CO 4</b>	1	1	3	3	1	1	1	1	3	1	1	
<b>CO 5</b>	1	1	1	3	1	1	1	1	1	1	1	

## Mapping of COs with Pos

<b>CO/ PSO</b>	<b>P01</b>	<b>P02</b>	<b>P03</b>	<b>P04</b>
<b>CO1</b>	1	1	1	1

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<b>CO2</b>	1	1	1	1
<b>CO3</b>	1	3	1	1
<b>CO4</b>	1	1	1	3
<b>CO5</b>	1	1	1	1

**Note:**   ♦ Strongly Correlated – 3               ♦ Moderately Correlated – 2  
                  ♦ Weakly Correlated -1

**COURSE DESIGNER:**  
**Dr.S.SANTHI**

**Forwarded By**



(Dr.Vasantha Esther Rani)

**SEMESTER –V***For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WE EK	CREDITS
UAHS	19N5CC14	PRESCHOOL ADMINISTRATION LAB	Practical	4	2

**Course Description:**

This course helps the students to develop constructive knowledge on the various skills in managing the crèche and preschool.

**Objectives:**

To teach how to

1. Plan a preschool programme –activities for children.
2. Prepare audio visual aids to support teaching
3. Prepare a play equipment.
4. Manage the preschool

**UNITS****UNIT –I. (10HRS)**

Developing Stories with suitable aids for Preschool Children

Preparing audio visual aids for informal talk

**UNIT –II (10HRS)**

Compose rhymes with expression and action for Preschool Children

**UNIT –III (20 HRS)**

Developing creative activities for Preschool Children

Planning science experience for Preschool Children

**UNIT –IV (10HRS)**

Construct low-cost play equipment for children.

Planning for indoor and outdoor games

**UNIT -V****(10HRS)**

Preparing picture book for Readiness activity.

Preschool participation in celebration and in health programmes

**REFERENCES**

1. Chowdhry. A & Chowdhry. R, Pre-school children – Development care and Education, New Age International CP Limited, NAIP publishing, Chennai, 2002.
2. Moony S.G(2013). Theories of childhood :An introduction Dewey, Montessori, Erikson, Piaget, and Vygotsky, Trade paperback, USA.

**COURSE CONTENTS & LECTURE SCHEDULE:**

<b>Module No.</b>	<b>Topic</b>	<b>No. of Lectures</b>	<b>Teaching Pedagogy</b>	<b>Teaching Aids</b>
<b>UNIT -1</b>				
1.1	Topic 1 Developing stories with suitable aids for Preschool Children.	5	Hands on Experiences	Black Board
1.2	Subtopic Preparing audio visual aids for informal talk.	5	Hands on Experiences/Demonstration	LCD & White board
<b>UNIT-II</b>				
2.1	Topic 2 Compose rhymes with expression on different themes	5	Lecture/Hands on Experiences	PPT & Black Board
2.2	Subtopic Music and action for Preschool Children	5	Hands on Experiences	
<b>UNIT -III</b>				
3.1	Topic 3 Developing creative activities for Preschool Children	10	Chalk & Talk Hands on Experiences	Black Board
3.2	Subtopic Planning science	5	Lecture/ Hands on Experiences	PPT & Black



	experience for Preschool Children			Board
3.3	Developing a creative Album	5	Chalk & Talk Hands on Experiences	LCD & Smart Board
<b>UNIT -IV</b>				
4.1	Topic 4 Construct low-cost play equipment for children.	6	Lecture/Hands on Experiences	Workshops
4.2	Subtopics Planning for indoor and outdoor games	4	Hands on Experiences	
<b>UNIT -V</b>				
5.1	Topic 5 Preparing picture book for Readiness activity.	4	Lecture/ and Group Discussion	Models
5.2	Subtopics Preschool participation in festival celebration and in health programmes	3	Hands on Experiences	Green Board Charts
5.3	Participation in Parent teacher Programmes	3	Group Work	Smart Board

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Construct the knowledge in developing stories, rhymes, and creative activities on their own.	K1, K2	PS011& PS013
CO 2	Develop skills on the preparation of low-cost play equipment for preschool children	K3	PS015

CO 3	Organise and administer Preschool programme and PTA meetings	K1, K4	PSO15 & PSO16
CO 4	Plan and organize indoor and outdoor games for preschool children	K2, K3	PSO15 & PSO16
CO 5	Explore their skills in strengthening the health concepts of children	K3, K4	PSO16

**EVALUATION PATTERN**

SCHOLASTIC				NON – SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test – 1**C2** – Internal Test – 2**C3** – Model Practical Exam**C4** – Record**C5** – Non – Scholastic**Mapping of COs with PSOs**

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CO / PS O	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO 1	1	1	1	1	1	1	1	1	1	1	3	1
CO 2	1	1	1	1	1	1	1	1	1	1	1	1
CO 3	1	1	1	1	1	1	1	1	1	1	1	1
CO 4	1	1	1	1	1	1	1	1	1	1	1	1
CO 5	1	1	1	1	1	1	1	1	1	1	1	1
CO / PS O	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO 1	3	1	3	1	1	1	1	1	1	1	1	
CO 2	1	1	3		1	1	1	1	1	1	1	
CO 3	1	1	3	3	1	1	1	1	1	1	1	
CO 4	1	1	3	3	1	1	1	1	3	1	1	
CO 5	1	1	1	3	1	1	1	1	1	1	1	

## Mapping of COs with Pos

CO/ PSO	P01	P02	P03	P04
CO1	1	1	1	1
CO2	1	1	1	1
CO3	1	3	1	1
CO4	1	1	1	3
CO5	1	1	1	1

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated

**COURSE DESIGNER:**  
**1.Dr.S.SANTHI**

**Forwarded By**



(Dr.Vasantha Esther Rani)

### III B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY

**SEMESTER –V***For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N5CC15	Housing and Art in Home	Lecture	6	4

**COURSE DESCRIPTION**

This course elicit knowledge on all aspects of housing and application of art in home.

**COURSE OBJECTIVES**

- Gain basic knowledge of art principles and gain skills in their application in the home.
- Understand basics of house planning.
- Understand the housing problems and social effects of housing in India.
- Gain basic knowledge of principles of maintenance of house.

**UNITS**

<b>UNIT – I</b>	<b>ART IN HOME</b>	<b>(15 HRS)</b>
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Design-Meaning, Types, Characteristics

Elements of Design – Line, Shape, Form, Colour, Size, Texture, Light, Space and Pattern.

<b>UNIT – II</b>	<b>PRINCIPLES OF DESIGN</b>	<b>(15 HRS)</b>
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Principles of Design – Harmony, Balance, Proportion, Rhythm, Emphasis

Colour – Prang colour system, Classes of colour, Colour harmony-related & contrast Colour.

<b>UNIT – III</b>	<b>TRENDS IN INTERIOR DESIGN</b>	<b>(20 HRS)</b>
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Furniture – Selection, use and care, furniture arrangement in various rooms.

Accessories – Selection, use and care, Flower Arrangement – Types – Basic principles

Lighting – Requirements of good lighting, types – based on reflection and purpose-Natural and Artificial lightning.

<b>UNIT – IV</b>	<b>HOUSING AND ENVIRONMENT</b>	<b>(20 HRS)</b>
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Functions of house, selection of site, Principles of planning, Interior and exterior finishes – Wall, Floor and Ceiling, Landscape gardening – meaning, basic principles and units, Desirability of owning Vs renting a house.

<b>UNIT – V</b>	<b>HOUSING DEVELOPMENT IN INDIA</b>	<b>(20HRS)</b>
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Housing shortage in India, causes of housing problems in India, Role of Tamil Nadu Housing Board & NBO in Housing Development

**Self- study- Daily, weekly, periodical cleaning of house, Domestic pests and measures. Purification of water – household & large scale.**

Waste management-solid waste-burning, dumping and composting.

#### **REFERENCES:**

#### **TEXTBOOK:**

1. Mullick.P.(2007) *Text Book of Home Science*, Kalyani Publishers, Ludhiyana.

#### **REFERENCE BOOKS:**

##### **REFERENCES**

2. Bettar and Lockarty (1961), *Design for you*, Jotiss Wiley & Sons, Inc., New York.
3. Faulkner, R & Faulkner. S (1960). *Inside Today's Home*, Rinc Hart and Winston Inc. New York,
4. Goldstein H. & Goldstein V.( 1978). *Art in Everyday life*, The Macmillan Company, New York,
5. Gross I.H, Grandall E.W, & Knoll H.M. (1975) *Management for modern families*
6. Mullick.P.(2007) *Text Book of Home Science*, Kalyani Publishers, Ludhiyana.
7. Nickell & Dorsey, J.N (1976). *Management in Family Living*, Indian Edition,
8. Rutt, A.H.,(1967). *Home Furnishings* Wiley Easters Private Ltd., New Delhi.

#### **OPEN EDUCATION RESOURCE:**

1. <https://wwcw.homesandgardens.com/news/7-elements-of-design>
2. <https://www.hatchdesign.ca/principles-of-interior-design-part-1-balance/>
3. <https://hmhub.me/accessories-interior-decoration/>
4. <https://designingidea.com/types-of-flooring-materials-for-interior-design/>
5. <https://homedesignlover.com/interior-design/choosing-flooring-materials/>
6. <https://happho.com/different-materials-used-flooring/>

#### **COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT 1 ART IN HOME</b>				
1.1	Introduction	1	Chalk & Talk	LCD
1.2	Design – Meaning, Types, Characteristics	4	Chalk & Talk	Black Board
1.3	Elements of Design – Line, Shape, Form	3	Lecture	PPT & White board
1.4	Elements of Design – Colour, Size	3	Lecture	Smart Board
1.5	Elements of Design – Light and Space, Pattern	4	Lecture	Black Board
<b>UNIT -2 PRINCIPLES OF DESIGN</b>				
2.1	Principles of Design – Harmony, Balance	3	Lecture	LCD
2.2	Principles of Design – Proportion, Rhythm, Emphasis	3	Chalk & Talk	LCD
2.3	Colour – Prang colour system	3	Lecture	PPT & White board
2.4	Classes of colour	3	Discussion	PPT
2.5	Colour harmony – related & contrast	3	Lecture	Black board
<b>UNIT -3 TRENDS IN INTERIOR DESIGN</b>				
3.1	Furniture – Selection, use and care, Furniture arrangement in various rooms	4	Lecture	Black board
3.2	Accessories – Selection, use and care	4	Chalk & Talk	LCD

3.3	Flower arrangement – Types – Basic principles	5	Demonstration, Hands on Experience	Black board
3.4	Lighting – Requirements of good lighting	3	Lecture	PPT & White board
3.5	Lighting – Types – Based on reflection and purpose	4	Discussion	PPT & White board
<b>UNIT -4 HOUSING AND ITS ENVIRONMENT</b>				
4.1	Functions of house	2	Lecture	LCD
4.2	Selection of site	2	Chalk & Talk	LCD
4.3	Principles of planning	4	Lecture	PPT & White board
4.4	Interior and exterior finishes – Wall, Floor, and Ceiling	5	Lecture	PPT & White board
4.5	Landscape gardening – meaning, basic principles and units	4	Chalk & Talk	LCD
4.6	Desirability of owning Vs renting a house	3	Lecture	Black Board
<b>UNIT -5 HOUSING DEVELOPMENT IN INDIA</b>				
5.1	Housing shortage in India, causes of housing problems in India	3	Lecture	LCD
5.2	Role of Tamil Nadu Housing Board & NBO in Housing Development	3	Chalk & Talk	LCD
5.3	Daily, weekly, periodical cleaning of House	3	Discussion	Black Board
5.4	Domestic pest and measures	3	Discussion	Black Board



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5.5	Purification of water – household & large Scale	4	Discussion	Black Board
5.6	Waste management – solid waste – burning, dumping and composting	4	Lecture	PPT

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5
	40

All the course outcomes are to be assessed in the various CIA components.

The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :

**K1- Remember, K2-Understand, K3-Apply, K4-Analyse**

### EVALUATION PATTERN

SCHOLASTIC					NON – SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3**– Quiz

**C4** – Assignment

**C5** –OBT/PPT

**C6** – Non – Scholastic

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Classify the types, elements of design.	K2,K4	PSO17
CO 2	Explain the principles of design, and its application in interiors.	K1, K2	PSO17
CO 3	Construct house plan and landscaping.	K3,K4	PSO17
CO 4	Describe the housing problems and remedies.	K2	PSO17
CO 5	Build skills in interior designing.	K3, K4	PSO17

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	3	1	1	1	1	1	1	
CO2	1	1	1	1		3	1	1	1	1	1	
CO3	1	1	1	1	1	1	3	1	1	1	1	
CO4	1	1	1	1	1	1	1	3		1	1	
CO5	1	1	1	1	1	1	1	1	2	1	1	

**Mapping of COs with Pos**

CO/ PSO	P01	P02	P03	P04
CO1	1	1	1	1
CO2	1	2	1	1
CO3	1	1	3	1
CO4	1	1	1	1
CO5	1	1	1	1


**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2

♦ Weakly Correlated -1

**COURSE DESIGNER:**

**Dr. C. Priyalatha**

**Forwarded By**



(Dr.Vasantha Esther Rani)

### III B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –V

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N5CC16	Art In Everyday Life Lab	Practical	4	2

#### COURSE DESCRIPTION

This course imparts skill in decorating the interior based on art principles.

#### COURSE OBJECTIVES

- To impart knowledge on principles of design.
- To train students to set table for different occasions.
- To prepare wall hangings for different rooms.

#### UNITS

##### UNIT –1

**(10 HRS)**

Identification of elements and principles of design on art object.

##### UNIT—10 HRS)

Setting the table for various occasions like birthdayparty, formal dinner, and buffet

##### UNIT—3

**(20 HRS)**

Design and development of a wall hanging based on the principles of mounting pictures.

##### UNIT –4

**(10 HRS)**

Application of related and contrasting color harmonies on various crockeries.

##### UNIT—5

**(10 HRS)**

Survey on types of crockery and cutlery available in the market.

**REFERENCE BOOKS:**

1. Faulkner, R & Faulkner. S (1960). *Inside Today's Home*, Rinc Hart and Winston Inc. New York,
2. Goldstein H. & Goldstein V.( 1978). *Art in Everyday life*, The Macmillan Company, New York,

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT 1</b>				
1.1	Identification of elements and	5	Chalk & Talk	Black Board
1.2	Principles of design on art object.	5	Chalk & Talk	Black Board
<b>UNIT -2</b>				
2.1	Setting the table for various occasions like birthday party	5	Demonstration	PPT
2.2	Setting the table for various occasions like formal dinner	3	Demonstration	PPT
2.3	Setting the table for various occasions like Buffet	2	Demonstration	PPT
<b>UNIT -3</b>				
3.1	Design of a wall hanging based on the principles of mounting pictures.	10	Demonstration	Models
3.2	Development of a wall hanging	10	Demonstration	Models

	based on the principles of mounting pictures.			
<b>UNIT -4</b>				
4.1	Application of related and contrasting colour harmonies on various crockeries.	10	Demonstration, Group work	Crockeries
<b>UNIT -5</b>				
5.1	Survey on types of crockery and cutlery available in the market.	10	Lecture	Discussion

**EVALUATION PATTERN**

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test – 1**C2** – Internal Test – 2**C3** – Model Practical Exam**C4** – Record**C5** – Non – Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Recall the elements and principles of design.	K1	PSO19
CO 2	Organize the table for various occasions.	K3	PSO19
CO 3	Construct a wall hanging.	K3,K4	PSO19
CO 4	Illustrate a suitable design on crockery.	K2	PSO19
CO 5	Describe the recent trends in crockery and cutlery.	K1,K2	PSO19

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
CO2	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
CO3	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
CO4	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>	
CO5	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	

### Mapping of COs with Pos

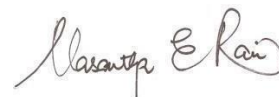
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CO/ PSO	PO1	PO2	PO3	PO4
C01	3	3	3	1
C02	3	3	3	1
C03	3	3	3	1
C04	3	3	3	1
C05	3	3	3	1

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦  
Weakly Correlated -1

**COURSE DESIGNER:**  
**Dr. C. Priyalatha**

**Forwarded By**



(Dr.Vasantha Esther Rani)



### III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –V

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N5ME1	Technical Textiles	Lecture	5	5

#### COURSE DESCRIPTION

This course offers deep insight into the various application areas of technical textiles.

#### COURSE OBJECTIVES

- To acquaint students with the concept of technical textiles and its scope.
- To know the applications of various types of technical textiles.

#### UNITS

##### UNIT –I INTRODUCTION TO TECHNICAL TEXTILES (10 HRS.)

Definition and scope of technical textiles, milestones in the development of technical textiles, textile processes and applications.

##### UNIT –II GEOTEXTILES (15 HRS.)

Introduction, types, essential properties- mechanical, filtration and chemical resistance. Natural fibre geotextiles, applications for natural geotextiles.

##### UNIT –III MEDICAL TEXTILES (20 HRS.)

Introduction, areas of application, fibres used, non-implantable materials, extracorporeal devices, implantable materials, healthcare/ hygiene products.

**Self -Study: Healthcare and hygiene products.**

##### UNIT –IV PROTECTIVE TEXTILES (15 HRS.)

Introduction, types, short term survival- drowning and extreme low temperatures, ballistic protection, protection from fire.

Long term survival - extreme weather conditions, high temperatures and associated hazards, chemical, microbiological and radiation hazards.

#### **UNIT –V (TRANSPORTATION) MOBILE TEXTILES (15 HRS.)**

Introduction, textiles in passenger cars, textiles in other road vehicles- heavy goods vehicles, buses and coaches. Rail applications, Textiles in aircraft.

**Self- Study: Marine applications.**

#### **REFERENCES:**

##### **TEXTBOOK:**

1. Horrocks, A.R. & Anand, S.C. Handbook of Technical Textiles. Wood Head Pub. Ltd., England.

##### **REFERENCE BOOKS:**

2. Howard L.Needles. (2001). *Textile Fibres, Dyes, Finishes and Processes*. Standard Publishers Distributors, Delhi.
3. Rattan, J.B. (2001). *Modern Textile Technology*. Abhishek Publications, Chandigarh.
4. Vidyasagar, P. V. (1998). *Handbook of Textiles*. Mittal Publications.

#### **OPEN EDUCATIONAL RESOURCES:**

1. <https://www.fibre2fashion.com/industry-article/826/technical-textiles-an-over-view>
2. [https://en.wikipedia.org/wiki/Technical\\_textile](https://en.wikipedia.org/wiki/Technical_textile)
3. <https://www.thebalancesmb.com/geotextiles-types-and-advantages-of-using-geotextiles-844579>
4. <https://www.jasonmills.com/blog/medical-textiles/>
5. <https://www.fibre2fashion.com/industry-article/1763/advanced-protective-textiles>

**COURSE CONTENTS & LECTURE SCHEDULE:**

<b>Module No.</b>	<b>Topic</b>	<b>No. of Lectures</b>	<b>Teaching Pedagogy</b>	<b>Teaching Aids</b>
<b>UNIT -1 INTRODUCTION TO TECHNICAL TEXTILES</b>				
1.1	Definition and scope of technical textiles	2	Chalk & Talk	Black Board
1.2	Milestones in the development of technical textiles	3	Lecture	LCD
1.3	Textile processes	2	Lecture	PPT & White board
1.4	Applications	3	Lecture	PPT & White board
<b>UNIT -2 GEO TEXTILES</b>				
2.1	Introduction and types of Geotextiles	3	Lecture	White board
2.2	Essential properties-mechanical, filtration and chemical resistance	4	Chalk & Talk	Black board
2.3	Natural fibre geotextiles	4	Lecture	PPT
2.4	Applications for natural geotextiles	4	Lecture	PPT
<b>UNIT - 3 MEDICAL TEXTILES</b>				
3.1	Introduction, areas of application, fibres used	4	Chalk &Talk	Black Board
3.2	Non-implantable materials	4	Lecture	PPT
3.3	Extracorporeal devices	4	Lecture	LCD
3.4	Implantable materials	4	Lecture	PPT
3.5	Healthcare and hygiene products	4	Lecture	PPT

<b>UNIT - IV PROTECTIVE TEXTILES</b>				
4.1	Introduction and types	5	Discussion	PPT
4.2	Short term survival	5	Lecture	LCD
4.3	Long term survival	5	Lecture	LCD
<b>UNIT - V TRANSPORTATION TEXTILES</b>				
5.1	Introduction and types	3	Lecture	LCD
5.2	Textiles in cars and heavy goods vehicles	4	Lecture	PPT
5.3	Rail applications	4	Lecture	PPT
5.4	Textiles in aircraft	4	Lecture	PPT

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1 10 Mks.	T2 10 Mks.	Quiz 5 Mks.	Assignment 5 Mks.	OBT/PT 5 Mks.	35 Mks.	5 Mks.	40Mks.	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

CIA	
Scholastic	35
Non Scholastic	5
	40

All the course outcomes are to be assessed in the various CIA components. The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :

**K1**- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

### EVALUATION PATTERN

SCHOLASTIC					NON – SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non – Scholastic

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Identify the application areas of Technical Textiles.	K1, K3	PSO8
CO 2	Describe the types of Geo Textiles, their properties and applications.	K1	PSO8
CO 3	Organise the four areas of Medical Textiles.	K3	PSO8
CO 4	Choose the appropriate protective textiles for short term and long-term survival.	K1, K3	PSO8
CO 5	Restate in own words the application of technical textiles for various modes of transport.	K1	PSO8

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	3	1	1	1	1
CO2	1	1	1	1	1	1	1	3	1	1	1	1
CO3	1	1	1	1	1	1	1	3	1	1	1	1
CO4	1	1	1	1	1	1	1	3	1	1	1	1
CO5	1	1	1	1	1	1	1	3	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

CO/ PSO	P01	P02	P03	P04
<b>CO1</b>	3	1	1	1
<b>CO2</b>	3	3	3	3
<b>CO3</b>	3	1	3	3
<b>CO4</b>	3	3	3	3
<b>CO5</b>	3	3	3	3

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦  
Weakly Correlated -1

**COURSE DESIGNER:**  
**Dr.R.Latha**

**Forwarded By**



(Dr.Vasantha Esther Rani)

### III B.Sc. Home Science with Food Biotechnology

#### SEMESTER –V

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N5ME2	Food Biotechnology	Lecture	5	5

#### COURSE DESCRIPTION

The course offers knowledge on the scope, importance and the basic aspects of biotechnology relating to foods

#### COURSE OBJECTIVES

- To enlighten the students on role of enzymes in food industries.
- To create awareness on biotechnological aspects of food additives
- To gain knowledge in plant and animal biotechnology

#### UNITS

##### UNIT –I ENZYMES (15HRS.)

Definition, Properties of enzymes, Microorganisms producing enzymes, Methods of enzyme production, **Self study : Enzymes produced - □- amylases, lipases, proteases, Use of enzymes in food industry – Proteases, glucose oxidase, catalase, lactase.**

##### UNIT –II ENZYMES IN FRUIT JUICES AND BREWING INDUSTRY (15 HRS.)

Enzymes used in the production of fruit juices, beer and distilled alcoholic drinks, processing steps of wine and beer.

##### UNIT –III FOOD ADDITIVES (15HRS.)

Organic acids – Production of citric acid, acetic acid, lactic acid

Sweeteners – Production of HFCS and glucose syrup

Microbial colour, Microbial flavours

Modification of starch and Oilseeds

##### UNIT –IV FOOD AND PLANT, ANIMAL BIOTECHNOLOGY (15HRS.)



Application of Plant and Animal Biotechnology in the Food industry.

Regulations and Oversight of Biotechnology

Fruits and Vegetables, Milled Corn Product and Milled Soy Products,

Golden rice, Vegetable oil.

Fish, Meat, Milk and Milk products

## **UNIT –V GENETICALLY MODIFIED FOODS (15HRS.)**

Basic concepts of DNA structure, definition of Genetically modified foods, types and techniques of Genetically modified foods, health and safety concerns of Genetically modified foods for human consumption

Advantages and disadvantages of Genetically modified foods

Ethical issues of Genetically modified foods

### **REFERENCES:**

1. Dubey, R.C.( 1996) *A textbook of Biotechnology*, S. Chand and Company Ltd., New Delhi
2. Gupta, K. (1995). *Elements of Biotechnology*, Rastogi Publications, Meerut.
3. Sriram Sridhar. (2005) *Enzyme Biotechnology*, Dominant Publishers and Distributors, New Delhi
4. Rita Singh. (2004) *Food Biotechnology*, Global Vision Publishing House, Delhi.
5. Trevor Palmer. (2004). *Enzymes: Biochemistry, Biotechnology and Clinical chemistry*; Affiliated East West Press Pvt ltd., New Delhi.

### **OPEN EDUCATIONAL REFERENCES:**

1. <http://www.businessdictionary.com/definition/food-biotechnology.html>
2. [HTTP://WWW.MROTHERY.CO.UK/GENETECH/GENETECHNOTES.HTM](http://www.mrothery.co.uk/genetech/genetechnotes.htm)
3. [HTTP://WWW.WPI.EDU/pUBS/e-PROJECT/aVAILABLE/e-PROJECT-031405-135846/UNRESTRICTED/iqp.PDF](http://www.wpi.edu/pubs/e-project/available/e-project-031405-135846/unrestricted/iqp.pdf)
4. [HTTP://OER.FUNAI.EDU.NG/WP-CONTENT/UPLOADS/2017/10/btg-307-food-biotechnology-i-](http://oer.funai.edu.ng/wp-content/uploads/2017/10/btg-307-food-biotechnology-i-)

DEFINITION-AND-SCOPE-OF-FOOD-bIOTECHNOLOGY-bY-dR.-FRIDAY-nWALO.PPT

5. [HTTPS://WWW.NCBI.NLM.NIH.GOV/BOOKS/nbk235032/](https://www.ncbi.nlm.nih.gov/books/nbk235032/)
6. [HTTPS://ACTASCIENTIFIC.COM/asag/PDF/asag-03-0438.PDF](https://actascientific.com/asag/PDF/asag-03-0438.PDF)
7. [HTTPS://WWW.RESEARCHGATE.NET/PUBLICATION/312875936 a PPLICATIONS OF food biOTECHNOLOGY](https://www.researchgate.net/publication/312875936_applications_of_food_biotechnology)

### **COURSE CONTENTS & LECTURE SCHEDULE:**

<b>Module No.</b>	<b>Topic</b>	<b>No. of Lectures</b>	<b>Teaching Pedagogy</b>	<b>Teaching Aids</b>
<b>UNIT -1 ENZYMES</b>				
1.1	Enzymes – Definition, Properties of enzymes	2	Chalk & Talk	Black Board
1.2	Microorganisms producing enzymes	2	Chalk & Talk	LCD
1.3	Methods of enzyme production	4	Lecture	PPT & White board
1.4	Enzymes produced - $\alpha$ -amylases, lipases, proteases,.	3	Lecture	Smart Board
1.5	Use of enzymes in food industry – Proteases, glucose oxidase, catalase, lactase	4	Lecture	Black Board
<b>UNIT -2 ENZYMES IN FRUIT JUICES AND BREWING INDUSTRY</b>				
2.1	Enzymes used in the production of fruit juices	3	Lecture	Black Board
2.2	Enzymes used in the production of beer and distilled alcoholic drinks	4	Chalk & Talk	LCD
2.3	processing steps of wine	4	Lecture	PPT & White board
2.4	processing steps of beer.	4	Lecture	Smart

				Board
<b>UNIT -3FOOD ADDITIVES</b>				
3.1	Organic acids – Production of citric acid, acetic acid, lactic acid	4	Lecture	Black Board
3.2	Sweeteners - Production of HFCS and glucose syrup	4	Lecture	PPT & White board
3.3	Microbial colour	2	Lecture	Smart Board
3.4	Microbial flavours	3	Chalk & Talk	LCD
3.5	Modification of starch and Oilseeds	2	Lecture	PPT & White board

<b>UNIT -4 FOOD AND PLANT,ANIMAL BIOTECHNOLOGY</b>				
4.1	Application of Plant and animal Biotechnology in Food industry	2	Lecture	PPT &White board
4.2	Regulation and oversight of biotechnology	3	Chalk & Talk	LCD
4.3	Fruits and Vegetables	3	Chalk & Talk	LCD
4.4	Milled Soy Products,Milled Corn Products	2	Lecture	Black Board
4.5	Golden rice, Vegetable oil	3	Lecture	PPT &White board
4.6	Meat,Fish, Milk and Milk products	2	Lecture	PPT & White board
<b>UNIT -5GENETICALLY MODIFIEDFOODS</b>				
5.1	Basic concepts of DNA structure		Lecture	PPT &

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		2		White board
5.2	Definition of Genetically modified foods	1	Lecture	PPT & White board
5.3	types and techniques of Genetically modified foods	3	Chalk & Talk	LCD
5.4	Health and safety concerns of Genetically modified foods for human consumption	3		
5.5	Advantages and disadvantages of genetically modified foods	2	Chalk & Talk	LCD
5.6	Ethical issues of Genetically modified foods	4	Lecture	Black Board

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1 10 Mks.	T2 10 Mks.	Quiz 5 Mks.	Assignment 5 Mks.	OBT/PT 5 Mks.	35 Mks.	5 Mks.	40Mks.	
K1	2	2	-	-	-	4	-	4	10 %
K2	2	2	5	-	-	9	-	9	22.5 %
K3	3	3	-	-	5	11	-	11	27.5 %
K4	3	3	-	5	-	11	-	11	27.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

CIA	
Scholastic	35
Non Scholastic	5
	40

All the course outcomes are to be assessed in the various CIA components. The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :

**K1** - Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

### EVALUATION PATTERN

SCHOLASTIC					NON – SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non – Scholastic

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
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CO 1	Describe the techniques in enzymes production and its application	K1	PSO3& PSO5
CO 2	Infer the process distilled alcoholic beverages	K4	PSO3& PSO5
CO 3	Classify the types of food additives of microorganism origin	K2	PSO5
CO 4	Compute the concept of transgenic plants and its application in food industry	K3	PSO5
CO 5	Interpret genetically modified foods and its application in food industry	K4	PSO5

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	3	1	3	1	1	1	1	1	1	1
CO2	1	1	3	1	3	1	1	1	1	1	1	1
CO3	1	1	3	1	3	1	1	1	1	1	1	1
CO4	1	1	3	1	3	1	1	1	1	1	1	1
CO5	1	1	3	1	3	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

### Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4
CO1	3	3	3	1
CO2	3	3	3	1
CO3	3	3	3	1
CO4	3	3	3	1
CO5	3	3	3	1

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦  
Weakly Correlated -1

**COURSE DESIGNER:**  
**Mrs.J. JosephineJesintha**

**Forwarded By**



(Dr.Vasantha Esther Rani)

### III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –V

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N5SB3	Entrepreneurial Skills – Baking Adulteration and Food Preservation	Lecture / Practical	2	2

#### COURSE DESCRIPTION

This course gives hands-on training in the preparation, display of various baked, preserved food products and identification of adulterants in commercially available foods.

#### COURSE OBJECTIVES

- To understand the principles of baking of various bakery products
- To understand the principles of food preservation and preparation of preserved foods.
- To develop skills for setting up a production unit.

#### UNITS

##### UNIT –I INTRODUCTION TO BAKERY AND BAKERY

##### TECHNIQUES

**(6HRS.)**

Introduction to Bakery, Baking Techniques – Bread, Cake, Biscuits & Cookies

##### UNIT –II FOOD PRESERVATION

**(6 HRS.)**

Introduction, Classification and use of preservatives

##### UNIT –III METHODS OF FOOD PRESERVATION

**(6 HRS.)**

Methods of Food preservation, Preparation of Jam, Jelly, Squash, Tuttyfrutti, Marmalade, Vathal, Vadagam.



#### **UNIT –IV FOOD ADULTERATION**

**(6 HRS.)**

Self-study -Types of Adulterants, Methods of Adulteration and Identification of Adulterants.

#### **UNIT –V FOOD ADDITIVES**

**(6 HRS.)**

Additives – Functions, Uses, Importance, Antioxidants, Coloring matter, Emulsifying agent and Stabilizers

#### **REFERENCES:**

#### **TEXTBOOK:**

1. Dearosier. N.N(1975). *The Technology of Food Preservation*.

#### **REFERENCE BOOKS:**

1. Lai G. Sideleappa G.B. (1987), *Preservation of Fruits and Vegetables* ICAR, New Delhi.
2. Parvinder S. Bali (2009). *Food Production Operations*, Oxford University Press, New Delhi.
3. Srilakshmi. B, (2008), *Food science*, New age international publishers.
4. Sudesh Jood&Neelani (2002) *Food Preservation*.
5. Thangam E. Philip, (1981). *Modern Cookery*, Vol I, Orient Longman, Mumbai.

#### **• OPEN EDUCATIONAL RESOURCES**

1. <https://www.onlinebiologynotes.com/food-preservation-from-microbial-spoilage-principle-and-methods/>
2. <https://www.cliffsnotes.com/study-guides/biology/microbiology/food-microbiology/food-preservation>
3. <https://www.intechopen.com/books/food-additives/introductory-chapter-introduction-to-food-additives>
4. <https://gcwgandhinagar.com/econtent/document/1589361321Unit%20V%20Food%20adulteration.pdf>
5. <http://www.ihmfaridabad.com/study-material/sem3-fsq-unit7.pdf>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 INTRODUCTION TO BAKERY AND BAKERY TECHNIQUES</b>				
1.1	Introduction to Bakery	2	Chalk & Talk	Black Board
1.2	Baking Techniques – Bread, Cake, Biscuits & Cookies	4	Demonstration, Hands on Training	Lab
<b>UNIT -2 FOOD PRESERVATION</b>				
2.1	Introduction	1	Lecture	Black Board
2.2	Classification of preservatives	2	Chalk & Talk	LCD
2.3	Uses of preservatives	2	Lecture	Black Board
<b>UNIT -3 METHODS OF FOOD PRESERVATION</b>				
3.1	Methods of Food preservation	2	Chalk & Talk	Black Board
3.2	Preparation of Jam, Jelly, Squash, Tuffyfrutti, Marmalade, Vathal, Vadagam	4	Hands on Training	Lab
<b>UNIT -4 FOOD ADULTERATION</b>				
4.1	Types of Adulterants	2	Chalk & Talk	Black Board
4.2	Methods of Adulteration	2	Lecture	LCD

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4.3	Procedure for identifying adulterants in foods	2	Demonstration, Hands on Training	Lab
<b>UNIT -5 FOOD ADDITIVES</b>				
5.1	Additives – functions, uses, importance antioxidants, coloring matter,	3	Chalk & Talk	Black Board
5.2	emulsifying agent and stabilizers.	3	Lecture	LCD

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
levels	T1 10 Mks.	T2 10 Mks.	Quiz 5 Mks.	Assignment 5 Mks	OBT/PPT 5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5

	<b>40</b>
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**All the course outcomes are to be assessed in the various CIA components.**

**The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:**

**K1- Remember, K2-Understand, K3-Apply, K4-Analyse**

### **EVALUATION PATTERN**

<b>SCHOLASTIC</b>					<b>NON – SCHOLASTIC</b>	<b>MARKS</b>		
<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>CIA</b>	<b>ESE</b>	<b>Total</b>
<b>10</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>40</b>	<b>60</b>	<b>100</b>

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non – Scholastic

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Define the terminology in baking, adulteration and preservation.	K1	PSO3
CO 2	Apply the principles of food preservation	K3	PSO3
CO 3	Choose the method of food preservation.	K3	PSO3
CO 4	Examine the adulterants in foods	K4	PSO3
CO 5	Classify the food additives	K2, K4	PSO3

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	3	1	1	1	1	1	1	1	1	1
CO2	1	1	3	1	1	1	1	1	1	1	1	1
CO3	1	1	3	1	1	1	1	1	1	1	1	1
CO4	1	1	3	1	1	1	1	1	1	1	1	1
CO5	1	1	3	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

CO/ PSO	PO1	PO2	PO3	PO4
<b>CO1</b>	2	2	2	3
<b>CO2</b>	2	2	2	3
<b>CO3</b>	2	2	2	3
<b>CO4</b>	2	2	2	3
<b>CO5</b>	2	2	2	3

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦ Weakly Correlated -1

**COURSE DESIGNER:**

**1. Mrs.JosephineJesintha**

**Forwarded By**



(Dr.Vasantha Esther Rani)

### III B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –V

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N5SB4	Entrepreneurial Skills – Participatory Rural appraisal	Lecture	2	2

#### COURSE DESCRIPTION

This course enlightens the students on concept of participatory rural appraisal.

#### COURSE OBJECTIVES

- To enable the students to understand the concept of participatory rural appraisal.
- To develop knowledge on tools of participatory rural appraisal.
- To impart knowledge on different types of mapping.
- To train students to prepare project appraisal.
- To apply different resources in mapping.

#### UNITS

<b>UNIT – I</b>	<b>INTRODUCTION TO PRA</b>	<b>[6 HRS]</b>
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PRA- Introduction, Meaning, Importance, History and nature of Participatory Appraisal and Planning

#### **UNIT – II PRINCIPLES AND TYPES OF PRA[6 HRS]**

Application of PRA in Rural Setting – Principles of PRA - Tools of PRA: Timeline, Trend change, Seasonal calendar, Daily routine

#### **UNIT – III MAPPING AND MODELLING [6 HRS]**

**Self- study -Mapping – Social and Resource mapping**

#### **UNIT – IV RANKING METHODS [6 HRS]**

Concept of wealth, health, Pair wise and Matrix Ranking

#### **UNIT – V PROJECT FORMULATION [6 HRS]**

Focus Group Discussion, Income and Expenditure Matrix, Problem Analysis

and Project Formulation, Reports and Documentation.

## REFERENCES:

### TEXTBOOK:

1. Narayanasamy.N,(2009). Participatory Rural Appraisal: Principles, Methods And Application, SAGE Publications Ltd.

### REFERENCE BOOKS:

1. Neelamukherjee (1997). Participatory Rural Appraisal volume I of studies in rural participation, concept publishing company, New Delhi.
2. Stringer, E.T.(2007). Action research (3rd ed). Thousand oaks, A: Sage Publications Ltd.

### OPEN EDUCATIONAL RESOURCES:

1. <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=15475>
2. <http://www.slideshare.net/pria87/Ranking-Methods>
3. <http://www.nzdl.org/cgi-bin/library?e=d-00000-00---off-0cdl--00-0---0-10-0---0---0direct-10---4-----0-1l--11-en-50---20-about---00-0-1-00-0--4---0-0-11-10-0utfZz-800&cl=CL2.6&d=HASH01fd3098cbe6ad79c6ae84c1.5.4&gt=1>

### COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT 1 - INTRODUCTION TO PRA</b>				
1.1	Introduction, meaning, importance	2	Chalk and talk	Black Board
1.2	History and nature of Participatory Appraisal and planning	4	Chalk and talk	LCD
<b>UNIT -2 PRINCIPLES AND MENU OF METHODS</b>				
2.1	Application of PRA in Rural setting, principles of PRA	2	Lecture	LCD
2.2	Tools of PRA- Timeline, trend change, seasonal calendar, daily routine	4	Chalk and talk	LCD
<b>UNIT -3 MAPPING AND MODELLING</b>				



3.1	Self -study and mapping	2	Chalk and talk	Black board
3.2	Social and Resource Mapping	4	Lecture	LCD
<b>UNIT -4 RANKING METHODS</b>				
4.1	Concept of health, wealth	2	Lecture	LCD
4.2	Pairwise and Matrix ranking	4	Chalk and talk	LCD
<b>UNIT -5 PROJECT FORMULATION</b>				
5.1	Focus group Discussion, Income and Expenditure Matrix	3	Lecture	LCD
5.2	Problem analysis and Project formulation	3	Chalk and talk	LCD

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5
	40

All the course outcomes are to be assessed in the various CIA components. The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :

K1- Remember, K2-Understand, K3-Apply, K4-Analyse

### EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non – Scholastic

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Define PRA and its principles	K1	PSO23
CO 2	Describe the application of PRA.	K2	PSO23
CO 3	List the types and techniques of mapping.	K1	PSO23
CO 4	Plan participatory research method in the field	K3, K4	PSO23
CO 5	Identify the rural problems and plan projects.	K3	PSO23

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	3	3	
CO2	1	1	1	1	1	1	1	1	1	3	3	
CO3	1	1	1	1	1	1	1	1	1	3	3	
CO4	1	1	1	1	1	1	1	1	1	3	3	
CO5	1	1	1	1	1	1	1	1	1	3	3	


**Mapping of COs with POs**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	1	1	1	1
CO2	1	2	1	1
CO3	1	1	1	1
CO4	1	1	1	3
CO5	1	1	1	1

**Note:** ♦ Strongly Correlated – 3

♦ Moderately Correlated – 2

♦ Weakly Correlated -1

**COURSE DESIGNER:****Dr. C. Priyalatha****Forwarded By**


(Dr.Vasantha Esther Rani)

### III B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –V

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	21UG5SLA	CONSUMERISM	SELF LEARNING		2

#### COURSE DESCRIPTION

The course spells out the consumerism ,types of consumerism,Rights and Responsibilities of consumer.

#### COURSE OBJECTIVES

To enable students

1. To outline the concepts of consumerism
2. To develop an understanding on rights and responsibilities.
3. To describe the consumer protection act and redressal agencies

#### UNITS

##### UNIT- I

Definition – Meaning – Objectives of Consumerism – Characteristics -Importance- Advantages – Disadvantages of consumerism –Consumer Wants Vs Needs

##### UNIT- II

Types of Consumerism – Factors leading to Consumerism - Consumer Rights and Responsibilities-

##### UNIT- III

Consumer behaviour –Importance ,objectives, consumer Research process,Environmental factors affecting consumer behaviour.

##### UNIT- IV

Importance of Consumer Protection – Legal Protection to Consumers-  
ways and means of consumer protection- Redressal Agencies Under The Consumer Protection  
Act

## UNIT- V

Green Consumerism-Meaning- Necessity of Green Consumerism- Importance --Reactions to  
Green Consumerism

## OPEN EDUCATION RESOURCE

<https://www.economicdiscussion.net/india/consumer-protection/consumerism-in-india/31802>

<https://www.yourarticlelibrary.com/essay/essay-on-consumerism/50837>

<https://www.jstor.org/stable/1250712?seq=1>

<https://www.iare.ac.in> >files

## EVALUATION

Internal	External
Assignment – 20 Marks	Objective – 20 Marks
Test – 20Marks	Essay Type Qns. – 40 Marks
Total – 40Marks	Total – 60Marks

## Course Outcome

On completion of the course the student will be able to

<b>CO</b>		<b>Level</b>
<b>CO1</b>	Understand the concepts of consumerism	<b>K1</b>
<b>CO2</b>	Understand the importance of types of consumerism and their rights	<b>K2</b>
<b>CO3</b>	Describe the importance of consumer Protection	<b>K3</b>
<b>CO4</b>	Build skills in Green Consumerism	<b>K3</b>
<b>CO5</b>	Infer the consumer movement	<b>K4</b>

### Mapping COs Consistency with PSOs

<b>CO/ PSO</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>	<b>PSO4</b>	<b>PSO5</b>	<b>PSO6</b>	<b>PSO7</b>	<b>PSO8</b>	<b>PSO9</b>	<b>PSO10</b>	<b>PSO11</b>	<b>PSO12</b>
<b>CO1</b>	3			3							1	
<b>CO2</b>	3			3								
<b>CO3</b>	3			3				1				
<b>CO4</b>	1							1				
<b>CO5</b>	2		2	3								

**Note:** ♦ Strongly Correlated – 3  
Weakly Correlated -1

♦ Moderately Correlated – 2

♦

**COURSE DESIGNER**  
**Dr.C.Priyalatha**



**FORWARDED BY**

**(Dr. Vasantha Esther Rani)**

**III B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY  
SEMESTER –VI**

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6CC17	Resource Management	Lecture	6	4

**COURSE DESCRIPTION**

This course offers knowledge on managing resources like time, money and energy. It also deals with consumerism and standard of living.



**COURSE OBJECTIVES**

- Understand the housing values and goals.
- Understand the importance of Family Resource Management in family and personal living.
- Develop ability to apply Family Resource Management concepts in living situations to improve quality of family life.
- Appreciate the role of successful financial management in satisfying family living.

**UNITS**

<b>UNIT – I</b>	<b>MANAGEMENT PROCESS</b>	<b>[15 HRS]</b>
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Management- Meaning, Elements of management (planning, controlling and evaluation). Decision Making- Meaning, Steps in decision making, Types, Values, Goals, and Standards.

**Self Study: Characteristics of a good home maker.**

<b>UNIT – II</b>	<b>RESOURCES</b>	<b>[15 HRS]</b>
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Types of resources- Human, Non-human resources  
Time and Energy Management.

Work simplification- Principles and Techniques.

Labour Saving Devices- Major and Minor, Selection, Use and Care.

<b>UNIT – III</b>	<b>MONEY MANAGEMENT</b>	<b>[15 HRS]</b>
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Family income – types, sources of income, supplementing Family Income. Income management – Family Budget and its main items and steps in making budget. Engel's law of consumption, Law of Diminishing Marginal Utility, Law of Substitution, Financial Records of House, Savings.

<b>UNIT – IV</b>	<b>STANDARD OF LIVING</b>	<b>[15 HRS]</b>
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Meaning, Factors affecting standard of living, reasons for low standard of living, Remedial measures to overcome low standard of living.

**Self -Study: Remedial measures to overcome low standard of living.**

<b>UNIT – V</b>	<b>CONSUMERISM</b>	<b>[15 HRS]</b>
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**Self-study -Meaning of consumer, Consumerism, Problem faced by consumers Adulteration, Faulty weights and measures, misleading advertisements.** Problem of purchasing – When, Where, How, how much to buy? Types of labels, Consumer rights, consumer protection acts, consumer court, CGSI, Green Consumerism.

## **REFERENCES:**

### **TEXTBOOK:**

1. Gross, I.H., Crandall, E.W. & Knoll, H. M (1975) *Management for Modern Families*,

### **REFERENCE BOOKS**

1. Bigelow H.P.(1953) Family finance, J.B. Lippincott Co.
2. Dewett, K.K. & Varma (1976). Elementary Economics Theory, S. Chand and Company Ltd. New Delhi,
3. Gisban, L.B., (1971) .Economics of Consumers, American book Co,
4. Gordan (1971).Economics of Consumers, American book Co,
5. Maneesh.S. (2006). Home Management and Family Finance, Dominant Publishers and Distributors, New Delhi.
6. Mullick.P., (2007) Text Book of Home Science, Kalyani Publishers, Ludhiyana.
7. Nickell & Dorsey (1976), Management in Family living, Indian Edition,
8. Swarison, V (1981). Introduction to Home Management, Mac Milan and Co.,
9. Thankamma, J. (1965) .Food Adulteration, Mac Milan Co., New Delhi.

**OPEN EDUCATIONAL RESOURCES:**

1. <https://nios.ac.in/media/documents/srsec321newE/321-E-Lesson-10.pdf>
2. [https://www.brainkart.com/article/Decision-Making\\_33511/](https://www.brainkart.com/article/Decision-Making_33511/)
3. <https://www.brainkart.com> > article > Family
4. <https://www.yourarticlelibrary.com> > home-management
5. <https://www.yourarticlelibrary.com/family/family-budgeting-advantages-disadvantages-and-types-of-budget/47910>
6. <https://www.investopedia.com/ask/answers/013015/what-does-law-diminishing-marginal-utility-explain.asp>
7. [https://www.brainkart.com/article/Money-Management\\_33515/](https://www.brainkart.com/article/Money-Management_33515/)

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT 1 – Management Process</b>				
1.1	Management- Meaning Introduction	2	Chalk & Talk	Black Board
1.2	Elements of management (planning, controlling and evaluation).	3	Chalk & Talk	LCD
1.3	Decision Making- Meaning, Steps in decision making, Types	5	Lecture	PPT & White board
1.4	Values, Goals, and Standards	4	Lecture	Smart Board
1.5	SelfStudy: Characteristics of a good home maker.	1	Discussion	Black Board

<b>UNIT -2 Resources</b>				
2.1	Types of resources- Human, Non-human resources	2	Lecture	LCD
2.2	Time Management	3	Chalk & Talk	LCD
2.3	Energy Management	3	Lecture	PPT & White board
2.4	Work simplification- Principles and Techniques.	5	Discussion	PPT
2.5	Labour Saving Devices- Major and Minor, Selection, Use and Care.	2	Lecture	Black board
<b>UNIT -3 Money Management</b>				
3.1	Family income – types, sources of income, supplementing Family Income.	3	Lecture	Black board
3.2	Income management – Family Budget and its main items and steps in making budget.	4	Lecture	LCD
3.3	Engel's law of consumption	2	Chalk & Talk	LCD
3.4	Law of Diminishing Marginal Utility, Law of Substitution	3	Lecture	PPT & White board
3.5	Financial Records of House, Savings.	3	Discussion	PPT & White board
<b>UNIT -4 Standard Of Living</b>				
4.1	Introduction and meaning	1	Lecture	LCD
4.2	Factors affecting	4	Chalk &	LCD

	standard of living		Talk	
4.3	reasons for low standard of living	4	Lecture	PPT & White board
4.4	Remedial measures to overcome low standard of living	4	Chalk & Talk	LCD
4.5	Self Study: Remedial measures to overcome low standard of living	2	Discussion	PPT
<b>UNIT -5 Consumerism</b>				
5.1	-Meaning of consumer, Consumerism	1	Lecture	LCD
5.2	Problem faced by consumers Adulteration, Faulty weights and measures,	4	Chalk & Talk	LCD
5.3	misleading advertisements . Problem of purchasing – When, Where, How, how much to buy	3	Lecture	PPT & White board
5.4	Types of labels	1	Lecture	PPT & White board
5.5	Consumer rights consumer protection acts, consumer court,	4	Chalk & Talk	LCD
5.6	Consumer Guidance society of India	2	Discussion	PPT

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.

CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5
	40

**All the course outcomes are to be assessed in the various CIA components.**

**The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :**

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

### EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2**C3** - Quiz**C4** – Assignment**C5** - OBT/PPT**C6** – Non – Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Describe the management process.	K1	PSO18
CO 2	Identify the human and non-human resource	K2, K3	PSO18
CO 3	Explain the financial management	K1,K2	PSO18
CO 4	Summerise the key elements of standard of living	K2, K4	PSO18
CO 5	Build the concept of consumerism.	K3, K4	PSO18

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO1 0	PSO1 1	PSO1 2
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1

CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO2 2	PSO2 3	
CO1	1	1	1	1	3	3	1	3	1	1	1	
CO2	1	1	1	1	3	3	1	3	1	1	1	
CO3	1	1	1	1	3	3	1	3	1	1	1	
CO4	1	1	1	1	3	3	1	3	1	1	1	
CO5	1	1	1	1	3	3	1	3	1	1	1	

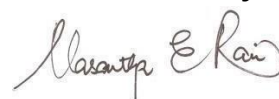
### Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4
CO1	1	1	1	1
CO2	1	2	1	1
CO3	1	1	3	1
CO4	1	1	1	1
CO5	1	1	1	1

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

**COURSE DESIGNER:**  
**Dr. C. Priyalatha**

**Forwarded By**



(Dr.Vasantha Esther Rani)



**III B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY**  
**SEMESTER –VI**

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6CC18	Resource Management Lab	Practical	3	2

**COURSE DESCRIPTION**

This course trains the students in managing the resources efficiently.

**COURSE OBJECTIVE.**

- To understand the concepts of furniture
- To select the different types of lighting
- To develop skill in bouquet making

**UNITS**

**UNIT-1**

**[5HRS]**

Furniture Arrangement for living room, dining room , kids room ,teenages room ( girl ,boy ) and master room.

**UNIT-2**

**[10 HRS]**

Types of Lighting-Direct ,Indirect and Diffused lightning.

**UNIT- 3**

**[10HRS]**

Arranging flowers in various styles for different areas, Vertical,Horizontal,Diagonal, Japanese, Mass,Crescent and S –bend.

**UNIT- 4**

**[5 HRS]**

Market-survey on availability of accessories for Kitchen,Living,Dining and Bed room.

**UNIT-5****[15 HRS]**

Application of principles for efficient money, energy, and time management.

## References

1. Maneesh.S. (2006). Home Management and Family Finance, Dominant Publishers and Distributors, New Delhi.
2. Mullick.P., (2007) Text Book of Home Science, Kalyani Publishers, Ludhiyana.
3. Nickell & Dorsey (1976), Management in Family living, Indian Edition, Swarison, V (1981). Introduction to Home Management, Mac Milan and Co.,

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT 1</b>				
1.1	Furniture Arrangement for living room, dining room	2	Chalk & Talk	PPT
1.2	kids room, teenagers room ( girl,boy ) and master room.	3	Chalk & Talk	PPT
<b>UNIT -2</b>				
2.1	Types of Lightning - Direct, Indirect	5	Lecture	Black board
2.2	Diffused lightning.	5	Chalk & Talk	PPT
<b>UNIT -3</b>				
3.1	Arranging flowers in various styles for different areas- Vertical,	3	Demonstration	PPT
3.2	Horizontal, Diagonal, Japanese	3	Demonstration	PPT

3.3	Mass, Crescent and S -bend	4	Demonstration	PPT
<b>UNIT -4</b>				
4.1	Market survey on availability of accessories for Kitchen , Living	3	Discussion Group work	Black board
4.2	Dining and Bed room.	2	Discussion	PPT
<b>UNIT -5</b>				
5.1	Application of principles for efficient money	5	Lecture/Hands on Experience	LCD
5.2	energy and time management	10	Lecture/Hands on Experience	Black board

### EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test - 1

**C2** – Internal Test - 2

**C3** – Model Practical Exam

**C4** – Record

**C5** – Non – Scholastic

**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Plan suitable furniture for different rooms	K4	PSO20
CO 2	Choose appropriate modes of lighting.	K1, K3	PSO20
CO 3	Illustrate and create various styles of flower arrangement.	K2	PSO20
CO 4	Classify accessories for home interiors.	K2, K4	PSO20
CO 5	Restate in own words the principles of resource management.	K1	PSO20

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	3	3	3	1	1	1	1	
CO2	1	1	1	1	3	3	3	1	1	1	1	
CO3	1	1	1	1	3	3	3	1	1	1	1	
CO4	1	1	1	1	3	3	3	1	1	1	1	
CO5	1	1	1	1	3	3	3	1	1	1	1	

**Mapping of COs with POs**

CO/ PSO	P01	P02	P03	P04
C01	3	3	1	1
C02	3	3	1	1
C03	3	3	1	1
C04	3	3	1	1
C05	3	3	1	1

**Note:** ♦ Strongly Correlated – 3

♦ Weakly Correlated -1

♦ Moderately Correlated – 2

**COURSE DESIGNER:****Dr. C. Priyalatha****Forwarded By**


(Dr.Vasantha Esther Rani)

### III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –VI

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6CC19	Clinical Nutrition and Dietetics	Lecture	5	4

#### COURSE DESCRIPTION

The course gives a detailed picture of the normal & therapeutic nutrition, highlighting the importance, recommended dietary allowance, medical nutrition therapy for various stages of life cycle and all disease conditions.

#### COURSE OBJECTIVES

- Learn the principles of meal planning, plan and prepare meals for families at different income levels and for special groups.
- Gain knowledge and develop skills and techniques in the planning and preparation of therapeutic diets for nutritional deficiencies.
- To recommend and provide appropriate nutritional care, prevention, and treatment of various diseases

#### UNITS

#### **UNIT –I NUTRITION FOR DEVELOPMENTAL MILESTONES (20 HRS.)**

Meal Planning – Principles of planning meals, meal pattern and its modification to suit to different disease conditions.

1. Nutrition during pregnancy – importance – changes nutritional requirements and complication.
2. Nutrition during lactation – importance, advantages of breast feeding, need for enhanced nutritional requirements.
3. Nutrition during infancy – nutritional requirement, weaning – methods – low-cost supplementary foods.

4. Nutrition for Preschoolers – nutritional requirements, inculcating feeding habits.
5. Nutrition for school children and adolescents – nutritional requirements in adolescence- nutritional problems of adolescents.
6. Geriatric nutrition – changes during old age, nutritional requirements during old age, nutrition related problems of old age.

**Self -Study: Nutrition for school children and adolescents – nutritional requirements in adolescence- nutritional problems of adolescents.**

## **UNIT –II DIET THERAPY**

**(15 HRS.)**

Diet therapy – Objectives of therapeutic diets

1. Routine Hospital diet –
  - a. a.TPN b. EN
2. Modification of diets in different diseases,

Etiology /Pre-disposing factors, clinical symptoms and modification of diets for

- a. Obesity and Underweight
- b. Diabetes mellitus
- c. Febrile disease conditions – Typhoid (acute), Tuberculosis (chronic) and Malaria (intermittent).
- d. Gastrointestinal disorders – Peptic- ulcer, diarrhoea, constipation

**Self Study: Anemia – types.**

## **UNIT-III THERAPEUTIC DIETS FOR HEART, KIDNEY & LIVER DISEASES**

**(15HRS.)**

Etiology or Pre-disposing factors, clinical symptoms and modification of diets for

- a) CVD-Hypertension and Atherosclerosis.
- b) Diseases of urinary tract – Nephritis, Nephrosis, Renal failure.
- c) Diseases of the liver – Hepatitis and Cirrhosis

## **UNIT –IV DIET IN AIDS AND CANCER**

**(10 HRS.)**

Etiology of Pre-disposing factors, clinical symptoms and modification of diets for  
a) Cancer b) AIDS

Allergy- symptoms, types of reactions & treatment-elimination diet.

Burns- symptoms, classification & dietary management.

## **UNIT –V COMMUNITY NUTRITION**

**(15 HRS.)**

Malnutrition – etiology and measures to overcome

Assessment of nutritional status

Nutrition Education

Nutrition Intervention Programme – CMNMP, ICDS

National and International Organisations

FAO, WHO, UNICEF, CARE, CFTRI and NIN

**Self-Study:Malnutrition – etiology and measures to overcome**

### **REFERENCES:**

### **TEXTBOOK:**

1. Antia H. P (1989) *Clinical Nutrition and Dietetics* Oxford University press

### **REFERENCE BOOKS:**

1. Carroll, A. Lutz (1997) *Nutrition for Diet Therapy*, Edition – 2, F. A. Davis Company, Philadelphia.
2. Davidson S. Passmore, R. Brock J. K. & Truwell A. S. (1975) *Human Nutrition and Dietetics*, The English Language Book Society and Churchill.
3. Ghosh S (1976). *The feeding and care of Infant and Young children*
4. Gupta L. C. & Kusium Gupta (1989). *Foods and Nutrition, Facts and Figures*, Jayapahothas, New Delhi,
5. Passmore R. Eastwood (1986) *Human Nutrition and Dietetics*, Longman Group Ltd.,
6. Raheena Begum, A. (1989). *Textbook of food, nutrition and dietetics*, Stanley Publishers,
7. 8. Skinner Paul (2000) Development of a medical nutrition therapy protocol for female collegiate athletes, J. AM. Diet ASS 101
8. 9. Swaminathan M. (1988) *Advanced textbook of Food and Nutrition*, Vol. I and II, the Bangalore Printing and Publishing Co., Ltd.,
9. Williams S.R (1977). *Nutrition and Diet Therapy* C.V. Mosby CO.

### **Open Educational Resources:**

1. <https://clinical-nutrition.imedpub.com/>
2. <http://egyankosh.ac.in/bitstream/123456789/33402/1/Unit-8.pdf>
3. <http://egyankosh.ac.in/bitstream/123456789/33399/1/Unit-9.pdf>



4. <http://egyankosh.ac.in/bitstream/123456789/33394/1/Unit-11.pdf>
5. <http://egyankosh.ac.in/bitstream/123456789/33387/1/Unit-14.pdf>
6. <https://www.subhartidde.com/slms/M.Sc%20-202%20Clinical%20and%20Therapeutic%20Nutrition.pdf>
7. [www.who.int/mediacentre/cardiovascular\\_diseases](http://www.who.int/mediacentre/cardiovascular_diseases)
8. [www.cdc.gov/diabetes/pubs/factsheets/kidney.htm](http://www.cdc.gov/diabetes/pubs/factsheets/kidney.htm)

### COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 NUTRITION FOR DEVELOPMENTAL MILESTONES</b>				
1.1	Meal Planning – Principles of planning meals, meal pattern and its modification to suit to different disease conditions.	2	Chalk & Talk	Black Board
1.2	Nutrition during pregnancy – importance – changes nutritional requirements and complication.	3	Chalk & Talk	Black Board
1.3	Nutrition during lactation – importance, advantages of breast feeding, need for enhanced nutritional requirements.	3	Lecture	PPT & White board
1.4	Nutrition during infancy – nutritional requirement, weaning – methods – low cost supplementary foods.	3	Chalk & Talk	Black Board
1.5	Nutrition for Preschoolers – nutritional requirements, inculcating feeding habits.	3	Lecture	Black Board
1.6	Nutrition for school children and adolescents – nutritional requirements in	3	Discussion	Black Board

	adolescence- nutritional problems of adolescents.			
1.7	Geriatric nutrition – changes during old age, nutritional requirements during old age, nutrition related problems of old age.	3	Lecture	LCD
<b>UNIT -2 DIET THERAPY</b>				
2.1	Diet therapy – Objectives of therapeutic diets	1	Chalk & Talk	Black Board
2.2	Routine Hospital diet – a.TPN b. EN	3	Lecture	LCD
2.3	Obesity and Underweight	3	Chalk & Talk	Black Board
2.4	Diabetes mellitus	3	Lecture	LCD
2.5	Febrile disease conditions – Typhoid (acute), Tuberculosis (chronic) and Malaria (intermittent).	2	Chalk & Talk	Black Board
2.6	Gastrointestinal disorders – Peptic- ulcer, diarrhea, constipation	3	Lecture	PPT & White board
<b>UNIT -3 THERAPEUTIC DIETS FOR HEART, KIDNEY &amp; LIVER DISEASES</b>				
3.1	CVD-Hypertension and Atherosclerosis	5	Lecture	PPT & White board
3.2	Diseases of urinary tract – Nephritis, Nephrosis, Renal failure.	5	Lecture	LCD
3.3	Diseases of the liver – Hepatitis and Cirrhosis	5	Lecture	PPT & White board
<b>UNIT -4 DIET IN AIDS AND CANCER</b>				

## CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

4.1	Etiology of Pre-disposing factors, clinical symptoms and modification of diets for Cancer	5	Lecture	LCD
4.2	Etiology of Pre-disposing factors, clinical symptoms and modification of diets for AIDS	5	Lecture	PPT & White board
<b>UNIT -5 COMMUNITY NUTRITION</b>				
5.1	Malnutrition – etiology and measures to overcome	2	Chalk & Talk	Black Board
5.2	Assessment of nutritional status	3	Lecture	PPT & White board
5.3	Nutrition Education	2	Demonstrations	Charts
5.4	Nutrition Intervention Programme – CMNMP, ICDS	2	Chalk & Talk	Black Board
5.5	FAO, WHO, UNICEF	3	Lecture	LCD
5.6	CARE, CFTRI and NIN	3	Lecture	LCD

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9

<b>K3</b>	3	3	-	-	5	11	-	11
<b>K4</b>	3	3	-	5	-	11	-	11
<b>Non Scholastic</b>	-	-	-	-	-		5	5
<b>Total</b>	10	10	5	5	5	35	5	40

<b>CIA</b>	
<b>Scholastic</b>	35
<b>Non Scholastic</b>	5
	40

**All the course outcomes are to be assessed in the various CIA components.**

**The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :**

**K1- Remember, K2-Understand, K3-Apply, K4-Analyse**

## **EVALUATION PATTERN**

<b>SCHOLASTIC</b>					<b>NON - SCHOLASTIC</b>	<b>MARKS</b>		
<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>CIA</b>	<b>ESE</b>	<b>Total</b>
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT**C6** – Non – Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Identify the principles of meal planning in nutrition through life cycle.	K1, K3	PSO3&PSO4
CO 2	Recall the nutritive value of foods for planning diets	K1	PSO3
CO 3	Recognize the etiology and symptoms of diseases	K1, K2	PSO3&PSO4
CO 4	Examine skills in preparation of therapeutic diets	K4	PSO3&PSO4
CO 5	Solve problem of malnutrition through intervention programmes	K3	PSO3&PSO4

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	3	3	1	1	1	1	1	1	1	1
CO2	1	1	3	3	1	1	1	1	1	1	1	1
CO3	2	1	3	3	1	1	1	1	1	1	1	1
CO4	1	1	3	3	1	1	1	1	1	1	1	1
CO5	1	1	2	3	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	

<b>C03</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>C04</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>C05</b>	1	1	1	1	1	1	1	1	1	1	1	

### Mapping of C0s with POs

CO/ PSO	P01	P02	P03	P04
<b>C01</b>	3	3	1	2
<b>C02</b>	3	3	1	1
<b>C03</b>	3	3	2	1
<b>C04</b>	3	3	2	1
<b>C05</b>	3	3	1	2

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

#### COURSE DESIGNER:

1. Dr. Vasantha Esther Rani

2. Mrs. D. Mouna

**Forwarded By**



(Dr. Vasantha Esther Rani)

### III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –VI

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6CC20	Clinical Nutrition and Dietetics Lab	Practical	3	2

#### COURSE DESCRIPTION

The course provides hands-on experience in the planning, formulation and calculation of nutrients for various stages of life cycle and deficiency disorders/degenerative diseases.

#### COURSE OBJECTIVES

- To enable the students to know the importance of the various stage of life cycle.
- To plan and prepare food for various therapeutic conditions.
- To alleviate deficiency disorders by planning diets rich in particular diseases.
- To share the knowledge from lab to land.

#### UNITS

##### UNIT –I (5 HRS.)

Planning meals for families at low, medium, and high-income levels.

##### UNIT –II (10 HRS.)

Planning, Preparation and serving of meals for

a) Expectant woman

- b) Lactating woman
- c) Preschool children
- d) School going children

### **UNIT –III**

**(10 HRS.)**

Planning, Preparation and serving of meals for

- e) Adolescents – boys, girls
- d) Adult woman – Lady Lecturer
- e) Adult Man – Hard working
- f) Old man

### **UNIT –IV**

**(10 HRS.)**

Planning, preparation and service of diets for

- a) Post operative conditions
- b) Obesity
- c) Diabetes Mellitus
- d) Peptic Ulcer
- e) Hypertension, Atherosclerosis

### **UNIT –V**

**(10 HRS.)**

Planning, preparation and service of diets for

- f) Liver disorders - Cirrhosis
- g) Renal disorders Nephritis
- h) Anaemia, Vitamin A deficiency disease
- i) Kwashiorkor, Marasmus
- j) Cancer

### **REFERENCE BOOKS:**

1. Carroll, A. Lutz (1997) *Nutrition for Diet Therapy*, Edition – 2, F. A. Davis Company, Philadelphia.
2. Davidson S. Passmore, R. Brock J. K. & Truwell A. S. (1975) *Human Nutrition and Dietetics*, The English Language Book Society and Churchill.
3. Ghosh S (1976). *The feeding and care of Infant and Young children*
4. Gupta L. C. & Kusium Gupta (1989). *Foods and Nutrition, Facts and Figures*, Jayapahothas, New Delhi,
5. Passmore R. Eastwood (1986) *Human Nutrition and Dietetics*, Longman Group Ltd.,

### **Open Educational Resources:**

1. <https://clinical-nutrition.imedpub.com/>
2. <http://egyankosh.ac.in/bitstream/123456789/33402/1/Unit-8.pdf>



**COURSE CONTENTS & LECTURE SCHEDULE:**

<b>Module No.</b>	<b>Topic</b>	<b>No. of Lectures</b>	<b>Teaching Pedagogy</b>	<b>Teaching Aids</b>
<b>UNIT -1</b>				
1.1	Planning meals for families at low, medium and high income levels.	5	Preparation & Demonstration	Essential materials and utensils
<b>UNIT -2</b>				
2.1	Planning, Preparation and serving of meals for a) Expectant woman b) Lactating woman c) Preschool children d) School going children	10	Preparation & Demonstration	Essential materials and utensils
<b>UNIT -3</b>				
3.1	Planning, Preparation and serving of meals for e) Adolescents – boys, girls d) Adult woman – Lady Lecturer e) Adult Man – Hard working f) Old man	10	Preparation & Demonstration	Essential materials and utensils
<b>UNIT -4</b>				
4.1	Planning, preparation and service of diets for a) Post operative conditions b) Obesity c) Diabetes Mellitus d) Peptic Ulcer e) Hypertension & Atherosclerosis	10	Preparation & Demonstration	Essential materials and utensils

UNIT -5				
5.1	Planning, preparation and service of diets for f) Liver disorders Cirrhosis g) Renal disorders Nephritis h) Anaemia, Vitamin A deficiency disease i) Kwashiorkar, Marasmus j) Cancer	10	Preparation & Demonstration	Essential materials and utensils

### EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
10	10	10	5	5	40	60	100

**C1** – Internal Test - 1

**C2** – Internal Test - 2

**C3** – Model Practical Exam

**C4** – Record

**C5** – Non – Scholastic

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:


NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Recall the principles of meal planning	K1	PSO3
CO 2	Choose and prepare balanced diets	K3	PSO3&PSO4
CO 3	Describe the dietary modification	K2	PSO3&PSO4
CO 4	Plan and prepare/execute therapeutic diets	K3, K4	PSO3&PSO4
CO 5	Construct diet for deficiency diseases	K3	PSO3&PSO4

**Mapping of C0s with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO1 0	PSO 11	PSO 12
CO1	1	1	3	1	1	1	1	1	1	1	1	1
CO2	1	1	3	3	1	1	1	1	1	1	1	1
CO3	2	1	3	3	1	1	1	1	1	1	1	1
CO4	1	1	3	3	1	1	1	1	1	1	1	1
CO5	1	1	2	3	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO2 2	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of C0s with POs**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	3	3	1	2
CO2	3	3	1	1
CO3	3	3	2	1
CO4	3	3	2	1
CO5	3	3	1	2

**COURSE DESIGNER:****Dr.Vasantha Esther Rani****Mrs.D.Mouna****Forwarded By**

**(Dr.Vasantha Esther Rani)**

### III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –VI

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6ME3	FAMILY DYNAMICS	Lecture	5	5

#### COURSE DESCRIPTION

This course describes the dynamics of the family with reference to its structure, function, problems, and supportive programmes.

#### COURSE OBJECTIVES

- To acquaint the students with the problems associated with the marital life,
- To orient the students with the current family problems specially on the disintegration of family and the solving methods.
- To give them thorough knowledge on reproductive health education.

#### UNITS

##### UNIT –I ADULthood AND MARRIAGE (15 HRS.)

Adulthood early, middle, and late adulthood characteristics and psychological changes.

Marriage - definition, functions, types Monogamy, polygamy, and polyandry and group marriage

Marital adjustments and factors affecting marital life

Guidance and Counseling need, method, and Supportive Agencies.

##### UNIT –II FAMILY (15 HRS.)

Family – Meaning, characteristics and functions -essential and non-essential.

Types based on – structure, Authority and Marriage.

Family disintegration – reasons and remedial measures

##### UNIT –III FAMILY CRISIS (15 HRS.)

Crisis and Crisis management – definition,

Classification – usual and expected, unexpected.

Prolonged illness, Bereavement, unemployment,

Suicide, Divorce, Separation, Alcoholism and Drug addiction Stress

management

**UNIT –IV WELFARE OF THE AGED AND CHILDREN WITH SPECIAL NEEDS (15 HRS.)**

Welfare programme for the aged. Welfare programme for the children with special needs – Institutions, Services, Programmes and concessions for children with special needs

**UNIT –V POPULATION EDUCATION AND FAMILY WELFARE (15HRS.)**

Population – Definition, Population growth and Population explosion, causes and effect of population explosion

**Self-Study: Population education, - definition, population education at various levels**

**Family planning methods- programmes, adolescent reproductive health education.**

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**PRACTICALS**

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- i. A study on family structure and family problems
- ii. Visit to family counseling center
- iii. Visit to Old Age Home.

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**REFERENCES**

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**TEXTBOOK:**

- 1. Devadas R.P & Jaya (1991) *Text Book of Child Development* Macmillan India Ltd, Madras.

**REFERENCE BOOKS:**

1. Helen, B. (1995) *Developing Child*, Harper Collins Publishers, New York.
2. 3. Hurlock E.B, (1981) *Developmental psychology: a life-span approach*
3. Tata McGraw -Hill, New York.
4. 4. Hurlock E. B, (2004). *Child Development*, (6<sup>th</sup> ed), McGraw Hill Inc., New York
5. Sharma R.N (1986). *Indian Social Problems*. Media Promoters and Publishers Pvt Ltd Mumbai,
6. 6. Suria Kanthi A. (2004) *Child development- An introduction*. Kavitha Publications, Gandhigram, Tamil Nadu

**OPEN EDUCATIONAL RESOURCES:**

1. <https://guides.lib.uconn.edu/humandevelopment/oer>
2. <http://egyankosh.ac.in/handle/123456789/55008>
3. <https://oer.uoch.edu.pk/home/watch/lecture/2131/130595>

**COURSE CONTENTS & LECTURE SCHEDULE:**

<b>Module No.</b>	<b>Topic</b>	<b>No. of Lectures</b>	<b>Teaching Pedagogy</b>	<b>Teaching Aids</b>
<b>UNIT -I ADULTHOOD AND MARRIAGE (15HRS.)</b>				
1.1	Topic 1- Adulthood Early Middle and Late adulthood Characteristics and Psychological changes.	5	Chalk&Talk, discussion	Black Board
1.2	Subtopic - Marriage Definition Functions, Types Monogamy, polygamy, and polyandry and group marriage .	4	Lecture	LCD &White board
1.3	Marital adjustments and factors affecting marital life	4	Lecture and discussion	
<b>UNIT -II FAMILY (18 HRS.)</b>				
2.1	Topic 2- Family Meaning, characteristics Functions -essential and non-essential.	5	Lecture	PPT& Black Board
2.2	Subtopic Types based on – structure, Authority and Marriage	5	Chalk & Talk	Green Board
2.3	Topic 3 Family disintegration – reasons and remedial measures.	5	Chalk &Talk,Group Discussion	Black Board and PPT
<b>UNIT -III FAMILY CRISIS (15 HRS.)</b>				
3.1	Topic 4- Crisis Crisis and Crisis management – definition, Classification – usual and expected,	3	Chalk & Talk	Black Board&LC D

	unexpected.			
3.2	Prolonged illness, Suicide Bereavement,	3	Lecture	PPT& Black Board
3.3	Desertion, Divorce, Separation	3	Chalk & Talk	LCD & Smart Board
3.4	Alcoholism and Drug addiction unemployment	3	Chalk & Talk	Black Board
3.5	Stress ManagementTechnique s	3	Chalk & Talk, Group Discussion, Demonstration	Smart Board
<b>UNIT -IV WELFARE OF THE AGED AND CHILDREN WITH SPECIAL NEEDS (15 HRS.)</b>				
4.1	Topic5 Welfare programme for the aged. Government and Non-Govt	5	Lecture	Smart Board
4.2	Subtopics Welfare programme for the children with special needs – Institutions, andService s	5	Lecture	PPT
4..3	Programmes and concessions for children with special Needs	5	Chalk & Talk	LCD
<b>UNIT -V POPULATION EDUCATION AND FAMILY WELFARE (15HRS.)</b>				
5.1	Topic 6 Population – Definition, Population growth and Status	5	Lecture and Group Discussion	Models
5.2	Population Explosion, Causes and effect of population explosion	5	Lecture	Green Board Charts
5.3	Adolescent Reproductive health education	5	Lecture/Discussion	PPT

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5
	40

✓ All the course outcomes are to be assessed in the various CIA components.

✓ The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:



NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Describe the characteristics different stages of adulthood.	K1,K2	PSO13
CO 2	Restate in own words the problems in the Institution of marriage and family.	K1, K2,	PSO14
CO 3	Identify and manage the stress arise out of family crisis.	K1, K3	PSO14
CO 4	Summarize the welfare programme for the aged and children with special needs	K2, K3 &K4	PSO12
CO 5	Built knowledge on the Growth status of population.	K2 & K4	PSO14

### Mapping of COs with PSOs

CO/ PSO	PS 01	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	3
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PS 01 3	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	3	1	1	1	1	1	1	1	1	1	1	

<b>CO2</b>	1	3	1	1	1	1	1	1	1	1	1	
<b>CO3</b>	1	3	1	1	1	1	1	1	1	1	1	
<b>CO4</b>	1		1	1	1	1	1	1	1	1	1	
<b>CO5</b>	1	2	1	1	1	1	1	1	1	3	3	

**Mapping of COs with POs**

<b>CO/ PSO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>
<b>CO1</b>	1	1	1	1
<b>CO2</b>	3	1	1	1
<b>CO3</b>	3	1	1	1
<b>CO4</b>	1	1	3	1
<b>CO5</b>	1	1	1	1

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

**COURSE DESIGNER:****1.Dr.S.SANTHI****Forwarded By**

**(Dr.Vasantha Esther Rani)**

### III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –VI

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6ME4	Nutrition For Health and Fitness	Lecture	5	5

#### COURSE DESCRIPTION

To integrate and apply the principles of sound nutrition to help, assess and evaluate physical fitness, body composition and dietary pattern and their interrelationship.

#### COURSE OBJECTIVES

- Understand the components of health and fitness and the importance of nutrition in maintaining health
- Make nutritional, dietary, and physical activity recommendations to achieve fitness and well-being.
- Develop ability to evaluate fitness and well-being.

#### UNITS

##### UNIT –I HOLISTIC APPROACH TO FITNESS AND HEALTH (15 HRS.)

Introduction to fitness and health; Classification of physical activity based on energy expenditure; Assessment of nutritional status

##### UNIT –II ENERGY SYSTEMS (15 HRS.)

Aerobic and anaerobic energy system, Energy input and output, Shifts in Carbohydrate and Fat metabolism, Mobilization of fat stores during exercise

### **UNIT-III NUTRITION IN SPORTS**

**(15 HRS.)**

Fuels and nutrients to support physical activity, Diet modification manipulation, Pre and Post game meals, Water and electrolyte balance, Losses and their replenishments during exercise and sports events, Carbohydrate Loading, Effect of dehydration, Ergogenic aids and Sports Drinks

### **UNIT -IV PHYSICAL FITNESS AND HEALTH - INTER-RELATIONSHIPS**

**(15HRS.)**

Significance of physical fitness and nutrition in the prevention and management of weight, Obesity, Diabetes Mellitus, Cardiovascular Diseases, Disorders of bone health and Cancer, Sports anemia, Female Athlete Triad.

### **UNIT -V ALTERNATIVE SYSTEMS OF HEAL AND FITNESS**

**(15 HRS.)**

Yoga, Meditation, Vegetarianism, Herbal/Naturopathy Medicines

#### **REFERENCES:**

#### **TEXTBOOK:**

1. Gupta L. C. & Kusium Gupta (1989). *Foods and Nutrition, Facts and Figures*, Jayapahothas, New Delhi,

#### **REFERENCE BOOKS:**

2. Swaminathan M. (1988) *Advanced textbook of Food and Nutrition*, Vol. I and II, the Bangalore Printing and Publishing Co., Ltd.
3. Gitanjali Chatterjee, (1999) *Handbook of Nutrition*, Rajat Publications.
4. Srilakshmi.B.(2007). *Food Science*, New age International Pvt.Ltd.,NewDelhi.

#### **OPEN EDUCATIONAL RESOURCES:**

1. <http://www.hanoverhornets.org/pe/wp-content/uploads/2017/01/nutritionnotes-2.pdf>

2. <https://school.ckovation.com/short-notes-nutrition/>
3. <https://ncert.nic.in/textbook/pdf/iehp104.pdf>

**COURSE CONTENTS & LECTURE SCHEDULE:**

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 HOLISTIC APPROACH TO FITNESS AND HEALTH</b>				
1.1	Introduction to fitness and health	3	Chalk & Talk	Black Board.
1.2	Classification of physical activity based on energy expenditure	4	Chalk & Talk	LCD
1.3	Assessment of nutritional status-Direct Methods	4	Lecture	Black Board,PPT
1.4	Assessment of nutritional status-Indirect Method	4	Lecture	White board PPT
<b>UNIT -2 ENERGY SYSTEMS</b>				
2.1	Aerobic and anaerobic energy system	4	Lecture	Black Board Charts
2.2	Energy input and output	3	Chalk & Talk	Black Board
2.3	Shifts in Carbohydrate and Fat metabolism	4	Lecture	Black Board
2.4	Mobilization of fat stores during exercise	4	Lecture	PPT
<b>UNIT -3 CASE STUDIES AND DIET MODIFICATIONS</b>				
3.1	Fuels and nutrients to support physical activity	1	PPT	LCD
3.2	Diet manipulation	2	Chalk & Talk	Black

				Board
3.3	Pre and Post game meals	2	Lecture	Black Board
3.4	Water and electrolyte balance	2	Lecture	LCD
3.5	Losses and their replenishments during exercise and sports events	2	Lecture	PPT
3.6	Carbohydrate Loading	3	Lecture	PPT
3.7	Effect of dehydration	1	Lecture	PPT
3.8	Ergogenic aids and Sports Drinks	2	Lecture	PPT
<b>UNIT - 4 PHYSICAL FITNESS AND HEALTH INTER-RELATIONSHIPS</b>				
4.1	Significance of physical fitness and nutrition in the prevention and management of weight Obesity	2	Lecture	Black Board
4.2	Significance of physical fitness and nutrition in the prevention and management of Diabetes Mellitus	2	Chalk & Talk	Green Board
4.3	Significance of physical fitness and nutrition in the prevention and management of Cardio Vascular Diseases	2	Discussion	Black Board
4.4	Significance of physical fitness and nutrition in the prevention and management of Disorders of bone health	3	Lecture	LCD
4.5	Significance of physical fitness and nutrition in the prevention and management	3	Lecture	PPT

	of cancer			
4.6	Sports anemia, Female Athlete Triad	3	Lecture	PPT
<b>UNIT-5 ALTERNATIVE SYSTEMS OF HEAL WAND FITNESS</b>				
5.1	Yoga	3	Lecture	Video
5.2	Meditation	4	Chalk & Talk	PPT.
5.3	Vegetarianism	4	Discussion	Black Board
5.4	Herbal Medicines	4	Lecture	LCD

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA

<b>Scholastic</b>	<b>35</b>
<b>Non Scholastic</b>	<b>5</b>
	<b>40</b>

✓ **All the course outcomes are to be assessed in the various CIA components.**

✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :**

**K1- Remember, K2-Understand, K3-Apply, K4-Analyse**

### **EVALUATION PATTERN**

<b>SCHOLASTIC</b>				<b>NON - SCHOLASTIC</b>	<b>MARKS</b>		
<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>CIA</b>	<b>ESE</b>	<b>Total</b>
<b>5</b>	<b>10</b>	<b>15</b>	<b>5</b>	<b>5</b>	<b>40</b>	<b>60</b>	<b>100</b>

**C1** – Average of Two Session Wise Tests

**C2** – Average of Two Monthly Tests

**C3** - Mid Sem Test

**C4** – Best of Two Weekly Tests

**C5** – Non – Scholastic



**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

<b>NO.</b>	<b>COURSE OUTCOMES</b>	<b>KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)</b>	<b>PSOs ADDRESSED</b>
CO 1	Recall the relationship of food and health.	K1	PSO3
CO 2	Describe terminologies related to fitness.	K1, K2,	PSO3 & PSO4
CO 3	Identify the different macro and micro nutrients.	K1, K3	PSO3 & PSO4
CO 4	Plan the balanced diet for different age groups.	K1, K2, K3 & K4	PSO3 & PSO4
CO 5	Examine the holistic approach to fitness and health.	K2 ,K4	PSO3 & PSO4

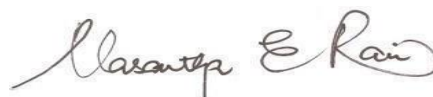
**Mapping of COs with PSOs**

<b>CO/ PSO</b>	<b>PS 01</b>	<b>PS 02</b>	<b>PSO 3</b>	<b>PSO 4</b>	<b>PSO 5</b>	<b>PSO 6</b>	<b>PSO 7</b>	<b>PSO 8</b>	<b>PSO 9</b>	<b>PSO 10</b>	<b>PSO 11</b>	<b>PSO 12</b>
<b>CO1</b>	1	1	3	3	1	1	1	1	1	1	1	1
<b>CO2</b>	1	1	3	3	1	1	1	1	1	1	1	1
<b>CO3</b>	1	1	3	3	1	1	1	1	1	1	1	1
<b>CO4</b>	1	1	3	3	1	1	1	1	1	1	1	1
<b>CO5</b>	1	1	3	3	1	1	1	1	1	1	1	1
<b>CO/ PSO</b>	<b>PS 01 3</b>	<b>PS 01 4</b>	<b>PSO 15</b>	<b>PSO 16</b>	<b>PSO 17</b>	<b>PSO 18</b>	<b>PSO 19</b>	<b>PSO 20</b>	<b>PSO 21</b>	<b>PSO 22</b>	<b>PSO 23</b>	
<b>CO1</b>	1	1	1	1	1	1	1	1	3	1	1	
<b>CO2</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO3</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO4</b>	1	1	1	1	1	1	1	1	1	1	1	
<b>CO5</b>	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

CO/ PO	PO1	PO2	PO3	PO4
CO1	3	1	2	2
CO2	3	1	2	2
CO3	3	1	2	2
CO4	3	1	2	2
CO5	3	1	2	2

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦  
Weakly Correlated -1

**COURSE DESIGNER:****1.Dr.Vasantha Esther Rani****2.Ms.D.Mouna****Forwarded By**

**(Dr.Vasantha Esther Rani)**

**III B.Sc.Home Science with Food Biotechnology****SEMESTER –VI***For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6ME5	Food and Dairy Processing	Lecture	5	5

**COURSE DESCRIPTION**

This course enlightens the students to understand the various food processing operations in food industries.

**COURSE OBJECTIVES**

- To impart systemic knowledge of basic and applied aspects of food processing and technology.
- To understand the methods of heat and cold processing.
- To provide in-depth knowledge on production of processed food products.

**UNITS****UNIT –I FOOD PROCESSING OPERATION****(15 HRS.)**

Characteristics of food raw materials – Geometric, physical, functional properties. Preparative Operations in food industry – Cleaning – objectives, Methods – Dry cleaning – Screening, Abrasion, Aspiration and Magnetic. Wet cleaning – Soaking, Spray washing, Flotation washing. Sorting – Methods – weight, size, shape and photometric.

Grading – grading factors, methods.

**Self -study: An overall view of commonly used packaging materials.**

**UNIT –II PROCESSING BY HEAT AND COLD (15 HRS.)**

Heat – blanching, canning, pasteurization, sterilization.

Cold – Refrigeration, freezing – direct and indirect freezing.

Processing by Dry heat

Drying – Definition, purpose, methods – sun drying, drying by mechanical.

**Self-study:freeze drying.**

**UNIT –III PROCESSING OF PLANT FOODS (15 HRS.)**

Cereals – Processing of wheat - milling.

Pulses – Processing –germination, decortication.

Fruits & Vegetables – Harvesting and storage, canning, drying.

**Self-study: vegetable paste and powders.**

**UNIT –IV PROCESSING OF ANIMAL FOODS (15 HRS.)**

Meat – Post mortem changes in meat – ripening and tenderizing meat, Grades of meat, Changes produced during heat processing.

Poultry – Classification and Processing.

Fish- Classification, Processing – Canning

**Self-study :smoking, salting and drying.**

**UNIT –V DAIRY PROCESSING (15 HRS.)**

Milk-composition, nutritive value, processing-milk collection-transportation and grading of milk-

clarification,standardization,pasteurization,homogenization,packaging.

Fermented milk products-butter, cheese, curd, shrikhand, Non-fermented milk products-milk powder, sweetened condensed milk, skim milk

**Self -study: Ice-cream.**

**REFERENCES:**

**TEXTBOOK:**

1. Manay, S.N, Shadaksharaswamy, M. (2005). *Foods, facts and principles*, New age international publishers, New Delhi.

**REFERENCE BOOKS:**

1. Sivasankar, B. (2008). *Food Processing and Preservation*, Prentice-Hall of India Pvt Limited, New Delhi.
2. Srilakshmi, B. (2008). *Food science*, New age international publishers, New Delhi.
3. Subbulakshmi, G, Udipi, S.A. (2006). *Food processing and preservation*, New age international publishers, New Delhi.
4. Sudeshjood, Khetarpaul, N. (2002). *Food preservation*, Agrotech publishing academy, Udaipur.

### Open Educational Resources:

1. [https://www.researchgate.net/publication/323167448\\_1\\_-\\_Introduction\\_to\\_cereal\\_processing\\_and\\_by-products](https://www.researchgate.net/publication/323167448_1_-_Introduction_to_cereal_processing_and_by-products)
2. [https://www.unido.org/sites/default/files/2009-04/Small\\_scale\\_cereal\\_milling\\_and\\_bakery\\_products\\_0.pdf](https://www.unido.org/sites/default/files/2009-04/Small_scale_cereal_milling_and_bakery_products_0.pdf)
3. <https://ccsuniversity.ac.in/bridge-library/pdf/FST-Paper-II%20Technology%20of%20cereals,%20pulses%20and%20oilseeds-%20II%20Semester.pdf>
4. <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=805>
5. <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=807>
6. <http://www.fao.org/3/V5030E/V5030E03.htm#1.2%20Importance%20of%20fruit%20and%20vegetables%20in%20world%20agriculture>
7. <https://meridian.allenpress.com/jfp/article/33/2/64/425033/EGG-PROCESSING-TECHNOLOGY-PROGRESS-AND-SANITATION>
8. <https://www.britannica.com/technology/meat-processing>

### COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT -1 FOOD PROCESSING OPERATION</b>				
1.1	Characteristics of food raw materials	2	Chalk & Talk	Black Board
1.2	Preparative Operations in food industry	2	Chalk & Talk	Black Board
1.3	Different Cleaning methods	4	Lecture, Group Discussion	PPT, Black Board
1.4	Different Sorting methods	4	Lecture, Discussion	PPT, Black

				Board
1.5	Different Grading methods	3	Lecture	Black Board,PPT
<b>UNIT -2 PROCESSING BY HEAT AND COLD</b>				
2.1	Processing by heat-Canning & Blanching	3	Lecture	PPT & Videos
2.2	Pasteurization and Sterilization	3	Chalk & Talk	Black Board
2.3	Processing by Cold-Refrigeration	2	Lecture	Black Board
2.4	Freezing	3	Lecture	Black Board
2.5	Processing by dry heat-Different drying methods	4	Lecture	PPT & Videos
<b>UNIT -3 PROCESSING OF PLANT FOODS</b>				
3.1	Cereal Processing-Wheat Milling	3	Chalk & Talk	Black Board
3.2	Pulse Processing	4	Chalk & Talk, Discussion	Black Board
3.3	Fruits Processing	4	Lecture	PPT & Videos
3.4	Vegetable Processing	4	Lecture	PPT & Videos
<b>UNIT -4 PROCESSING OF ANIMAL FOODS</b>				
4.1	Meat Processing	3	Chalk & Talk, Discussion	Black Board
4.2	Meat Processing	3	Lecture	PPT & Videos
4.3	Fish Processing	3	Lecture	PPT & Videos
4.4	Fish Processing	3	Lecture	PPT & Videos

4.5	Poultry Processing	3	Lecture	PPT & Videos
<b>UNIT -5 DAIRY PROCESSING</b>				
5.1	Milk Processing	4	Chalk & Talk, Discussion	Black Board
5.2	Milk Packaging	3	Lecture	PPT & Videos
5.3	Fermented Milk Products	4	Lecture	PPT & Videos
5.4	Non-Fermented Milk Products	4	Lecture	PPT & Videos

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1 10 Mks.	T2 10 Mks.	Quiz 5 Mks.	Assignment 5 Mks	OBT/PPT 5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40



CIA	
Scholastic	35
Non Scholastic	5
	40

**All the course outcomes are to be assessed in the various CIA components.**

**The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:**

**K1- Remember, K2-Understand, K3-Apply, K4-Analyse**

## EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non – Scholastic

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Define the characteristics of food raw materials	K1	PSO3
CO 2	Recall the preparative operations in food industries	K1	PSO3
CO 3	Classify the methods of heat and cold processing	K2	PSO3,PSO5
CO 4	Choose the different processing methods adopted for plant and animal foods	K3	PSO3
CO 5	Illustrate the processing & preparation of milk and milk products	K4	PSO3,PSO5

### Mapping of COs with PSOs

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	3	1	1	1	1	1	1	1	1	1
CO2	1	1	3	1	1	1	1	1	1	1	1	1
CO3	1	1	3	1	2	1	1	1	1	1	1	1
CO4	1	1	3	1	1	1	1	1	1	1	1	1
CO5	1	1	3	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

**Mapping of COs with POs**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	1	1	1	1
CO2	1	1	1	1
CO3	1	1	2	1
CO4	1	1	2	1
CO5	1	1	2	1

**Note:** ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦  
Weakly Correlated -1

**COURSE DESIGNER:**  
**1.Dr.K.Karthiga**

**Forwarded By**



(Dr.Vasantha Esther Rani)

### III B.Sc.Home Science with Food Biotechnology

#### SEMESTER –VI

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6ME6	Women and Entrepreneurship Development	Lecture	5	5

#### COURSE DESCRIPTION

This course offers deep insight into the concepts of entrepreneurship and the institution for entrepreneurship development. It also deals with the preparation of project report and appraisal.

#### COURSE OBJECTIVES

- To enable students to understand the concepts of entrepreneurship
- To motivate them to start business
- To impart knowledge on the financial institution entrepreneurship development.
- To train them to prepare project report.

#### UNITS

<b>UNIT – I</b>	<b>INTRODUCTION TO ENTREPRENEURSHIP</b>	<b>[15 HRS]</b>
Entrepreneurship- Meaning, Importance, Concept of women Entrepreneurship, Characteristics of Entrepreneur, Function of women Entrepreneurship, Developing women Entrepreneur, Problems of women Entrepreneur.		
<b>UNIT – II</b>	<b>INPUTS TO START BUSINESS</b>	<b>[15 HRS]</b>
How to start Business-Product selection -form of ownership - Sole proprietorship and partnership , Plant location - land , building , water and power - raw materials- machinery - man power - other infrastructural facilities -Licensing registration and bye laws.		
<b>UNIT – III</b>	<b>FINANCIAL INSTITUTION</b>	<b>[15 HRS]</b>
<b>Self-study -InstitutionalArrangement for Entrepreneurship Development D.I.C. S.I.D.C.O, N.S.I.C. S.I.S.I. – Institutional Financeto Entrepreneurs – T.I.I.C. S.I.D, B.I, MSME androle of commercial banks.</b>		
<b>UNIT – IV</b>	<b>REPORT PREPARATION</b>	<b>[15 HRS]</b>

Project Report Meaning and importance-Contents of a project report -Format of a report (as per requirements of financial institutions)  
Project Appraisal Meaning, market feasibility, technical feasibility – financial feasibility-break even analysis.

<b>UNIT – V</b>	<b>RECENT TRENDS IN ENTREPRENEURSHIP</b>	<b>[15 HRS]</b>
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Rural Entrepreneurship – Meaning, need, opportunities and problems of women entrepreneur

Agri – entrepreneurship – Meaning, need, opportunities and challenges involved in developing agri-entrepreneurship

#### REFERENCES:

#### TEXTBOOK:

Khanka.S.S (2018). *Entrepreneurial Development*, S.Chandhan Company Ltd, New Delhi

#### REFERENCE BOOKS:

Jose Paul, N, Entrepreneurship Development. India Taxmann Publication, 2000.

2. Khan, M.A, - Entrepreneurship Development Programmes in India, Jaipur, India, Kanishka Publishing House, 1992.

4. Vijayashree. P.T.-Entrepreneurial Development and Small Business Management, India Pearson Publishers. 2005.

#### OPEN EDUCATIONAL RESOURCES:

1. <https://articles.bplans.com/how-to-get-your-business-funded/>
2. <https://accountlearning.com/important-qualities-entrepreneur/>
3. <https://www.businessmanagementideas.com/entrepreneurship-2/rural-entrepreneurship/21624>
4. <https://www.ukessays.com/essays/economics/opportunities-and-challenges-for-rural-entrepreneurship-in-india-economics-essay.php>
5. <https://www.g-fras.org/en/agripreneurship.html>
6. [https://www.researchgate.net/publication/339843368\\_What\\_is\\_AGRI-ENTREPRENEURSHIP\\_and\\_why\\_India\\_needs\\_it](https://www.researchgate.net/publication/339843368_What_is_AGRI-ENTREPRENEURSHIP_and_why_India_needs_it)

#### COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT 1 INTRODUCTION TO ENTREPRENEURSHIP</b>				

1.1	Meaning, objectives, concept of women Entrepreneurship	4	Chalk & Talk	Black Board
1.2	Characteristics of entrepreneurship	2	Chalk & Talk	LCD
1.3	Functions of women entrepreneurship	2	Lecture	PPT & White board
1.4	Developing women entrepreneurship	4	Lecture	Smart Board
1.5	Problems of women entrepreneur	3	Lecture	Black Board
<b>UNIT – 2 TECHNIQUES TO START BUISNESS</b>				
2.1	How to start a business, product selection	3	Lecture	LCD
2.2	Forms of ownership – sole proprietorship and partnership	3	Chalk & Talk	LCD
2.3	Plant location, land building, water and power	2	Lecture	PPT & White board
2.4	Raw materials, machinery, man power, other infrastructural facilities	4	Lecture	PPT
2.5	Licensing and registration and bye laws	3	Chalk and talk	Black board
<b>UNIT -3 FINANCIAL INSTITUTION</b>				
3.1	Self -study- institutional arrangement for entrepreneurship development	2	Lecture	Black board
3.2	D.I.C, S.I.D.C.O.,	2	Lecture	LCD
3.3	N.S.I.C, S.I.S.I	3	Chalk & Talk	LCD

3.4	Institutional finance to entrepreneurs T.I.I.C., S.I.D.B.I.	4	Lecture	PPT & White board
3.5	Role of commercial banks	4	Chalk and talk	PPT & White board
<b>UNIT -4REPORT PREPARATION</b>				
4.1	Project report- meaning and importance	2	Lecture	LCD
4.2	Content of project report, format of report	3	Chalk & Talk	LCD
4.3	Project Appraisal – meaning	1	Lecture	PPT & White board
4.4	Market and technical feasibility	4	Lecture	PPT & White board
4.5	Financial feasibility	2	Chalk & Talk	LCD
4.6	Break even analysis	3	Chalk & Talk	PPT
<b>UNIT -5 RECENT TRENDS IN ENTREPRENEURSHIP</b>				
5.1	Rural entrepreneurship-meaning, need	2	Lecture	LCD
5.2	Opportunities and problems of women entrepreneurship	3	Chalk & Talk	LCD
5.3	Agri-preneurship – meaning, need	2	Lecture	PPT & White board
5.4	Opportunities in agripneurship	4	Lecture	PPT & White board
5.5	Challenges involved in developing agripneurship	4	Chalk & Talk	LCD
5.6	Rural entrepreneurship-meaning, need	2	Lecture	PPT

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5
	40

All the course outcomes are to be assessed in the various CIA components.

The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse



**EVALUATION PATTERN**

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1**C2** – Internal Test-2**C3** - Quiz**C4** – Assignment**C5** - OBT/PPT**C6** – Non – Scholastic**COURSE OUTCOMES**

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Define the concept of entrepreneurship.	K1	PSO21
CO 2	Describe the requisites to establish business.	K1,K2	PSO21
CO 3	List the institutions for entrepreneur development.	K1	PSO21
CO 4	Plan and prepare the project report.	K3,K4	PSO21
CO 5	Recognize the components of project appraisal.	K1	PSO21

**Mapping of COs with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	3	1	1	
CO2	1	1	1	1	1	1	1	1	3	1	1	
CO3	1	1	1	1	1	1	1	1	3	1	1	
CO4	1	1	1	1	1	1	1	1	3	1	1	
CO5	1	1	1	1	1	1	1	1	3	1	1	

**Mapping of COs with POs**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	1	1	1	1
CO2	1	2	1	1
CO3	1	1	1	1
CO4	1	1	1	2
CO5	1	1	3	1

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

**COURSE DESIGNER:****1.Dr. C. Priyalatha****Forwarded By**

**(Dr.Vasantha Esther Rani)**

### III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –VI

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6SB5	Entrepreneurial Skills – Nutrition Counselling	Lecture / Practical	2	2

#### COURSE DESCRIPTION

This course provides a strong ground in the strategies and techniques of nutrition counseling, nutrition education, nutrition care plan, evaluation, and documentation.

#### COURSE OBJECTIVES

- To acquire skills needed for effective counseling sessions related to the field of nutrition and dietetics
- To develop skills for group education and counselling

#### UNITS

##### UNIT –I DIET COUNSELLING (6 HRS.)

Diet Counselling – Definition, Counselling process and its significance.

Dietitian – Role of dietitian, classification, responsibilities and code of ethics. RD, Membership in IDA, NSI.

##### UNIT –II ASSESSMENT (6 HRS.)

Assessment - Assessment of needs of patients, Establishing rapport  
Communication process, Patient education

##### UNIT–III CASE STUDIES AND DIET MODIFICATIONS (6HRS.)

Case studies – Understanding Case Study - Clinical, Nutritional and Biochemical Profile, Therapeutic Modification of Diets, Report Writing

##### UNIT –IV COUNSELLING CENTER (6 HRS.)

Counselling Center - Pre requisites and preparation for setting up a counselling center.

**Self- study -Preparation of audio - visual aids for diet counselling.**

#### **UNIT -V COUNSELLING CAMPS**

**(6 HRS.)**

Counselling Camps - Organizing counselling camps for specific diseases

#### **REFERENCES:**

#### **TEXTBOOK:**

1. Srilakshmi. B. (2002) .*Dietetics*, New Age International Publishers,

#### **REFERENCE BOOKS:**

1. Skinner Paul (2000), *Development of a Medical Nutrition Therapy Protocol for Female Collegiate Athletes*, JAMA 101.
2. Carroll, A. Lutz. (1997).*Nutrition for Diet Therapy*, Edition – 2, F. A. Davis Company, Philadelphia.

#### **OPEN EDUCATION RESOURCES:**

1. <https://www.slideshare.net/jippyjack5/diet-counselling-71525270>
2. <https://www.sciencedirect.com/topics/food-science/diet-counseling>
3. <https://www.slideshare.net/DrSusmitaShah/diet-and-diet-counselling>
4. <https://emedprimarycare.com/diet-counseling-jacksonville/>
5. <https://www.encyclopedia.com/medicine/encyclopedias-almanacs-transcripts-and-maps/dietary-counseling>
6. <https://edepot.wur.nl/121590>
7. <http://seasonswomenscare.com/nutritional-counseling-steps-to-a-healthy-diet/>

**COURSE CONTENTS & LECTURE SCHEDULE:**

<b>Module No.</b>	<b>Topic</b>	<b>No. of Lectures</b>	<b>Teaching Pedagogy</b>	<b>Teaching Aids</b>
<b>UNIT -1 DIET COUNSELLING</b>				
1.1	Diet Counseling – Definition, Counseling process and its significance.	6	Chalk & Talk	Black Board
<b>UNIT -2 ASSESSMENT</b>				
2.1	Assessment - Assessment of needs of patients.	2	Discussion	Case Report
2.2	Establishing rapport Communication process.	2	Chalk & Talk	Black Board
2.3	Patient education.	2	Lecture & Role Play	PPT
<b>UNIT -3 CASE STUDIES AND DIET MODIFICATIONS</b>				
3.1	Case C case Studies- Understanding Case Study - Clinical, Nutritional and Biochemical Profile.	3	Discussion	Case Report
3.2	Therapeutic Modification of Diets and Report Writing.	3	Discussion	Case Report
<b>UNIT -4 COUNSELLING CENTER</b>				
4.1	Counselling Center - Prerequisites and preparation for setting up a counselling center.	6	Chalk & Talk	Black Board
<b>UNIT -5 COUNSELLING CAMPS</b>				
5.1	Counselling Camps - Organizing counselling camps for specific diseases	6	Chalk &Talk& Role Play	Black Board

	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total
Levels	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5
	40

All the course outcomes are to be assessed in the various CIA components.

The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are :

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

## EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non – Scholastic

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Explain the counseling process.	K2	PSO1
CO 2	Identify the appropriate counseling techniques.	K3	PSO1
CO 3	Choose audiovisual aids for diet counseling.	K3	PSO1
CO 4	Organize counseling camps for specific diseases.	K3	PSO1
CO 5	Recall the principles of therapeutic diet.	K1	PSO1

**Mapping of C0s with PSOs**

CO/ PSO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7	PSO 8	PSO 9	PSO 10	PSO 11	PSO 12
CO1	3	2	2	2	1	1	1	1	1	1	1	1
CO2	3	2	2	2	1	1	1	1	1	1	1	1
CO3	3	2	2	2	1	1	1	1	1	1	1	1
CO4	3	2	2	2	1	1	1	1	1	1	1	1
CO5	3	2	2	2	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	1	1	1	1	1	1	1	
CO2	1	1	1	1	1	1	1	1	1	1	1	
CO3	1	1	1	1	1	1	1	1	1	1	1	
CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

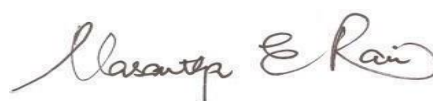
**Mapping of C0s with POs**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	3	1	2	2
CO2	3	1	2	2
CO3	3	1	2	2
CO4	3	1	2	2
CO5	3	1	2	2

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

**COURSE DESIGNER:**

1.Mrs. P. Magdalene Virjini

**Forwarded By**


(Dr.Vasantha Esther Rani)



### III B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY

#### SEMESTER –VI

*For those who joined in 2019 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N6SB6	Entrepreneurial Skills – Interior Design and Decoration	Lecture / Practical	2	2

#### COURSE DESCRIPTION

This course offers deep insight on all the aspects of interior design and decoration.

#### COURSE OBJECTIVES

- Know the concept of interior design and decoration
- Draw perspective views and House plans, Vastu application

#### UNITS

<b>UNIT – I</b>	<b>HOUSE PLAN</b>	<b>[10 HRS]</b>
Floor plan- low-income plan-medium income plan-high income plan-double storied plan.		
<b>UNIT – II</b>	<b>INTERIOR DESIGNING</b>	<b>[5 HRS]</b>
Clearance spaces- Living room-dining room-Living cum Dining room- bed room –Kitchen lay out-bath room		
<b>UNIT – III</b>	<b>FLOOR COVERINGS</b>	<b>[5 HRS]</b>
Definition- Selection, Types of floor coverings		
<b>UNIT – IV</b>	<b>WINDOW TREATMENTS</b>	<b>[5 HRS]</b>
Concept- Types of Windows – Types of Window Treatments		
<b>UNIT – V</b>	<b>VASTU IN HOUSE PLANNING</b>	<b>[5 HRS]</b>

**Self-study -Floor plan – Basics of Vastu- Feng Shui Application –Feng Shi,Scientific Evidence and Significance of Vastu.**

#### REFERENCE BOOKS:

1. Barrie Evans & James Powell.(1992). *Changing Design*, John Wiley Publication, New York,
2. Drieve Mary & Stevenson Isabelle. (1996). *The Complete Book of Interior Decoration*, Greystone Press, New York,

3. Faulkner ray (1995). *Inside Today's Home*, Kind Port Press, Tenesee,

#### OPEN EDUCATIONAL RESOURCES :

1. <https://www.homify.in/ideabooks/6229813/basic-vastu-tips-for-interior-design>
2. <https://www.homesandgardens.com/news/7-elements-of-design>
3. <https://www.hatchdesign.ca/principles-of-interior-design-part-1-balance/>
4. <https://hmhub.me/accessories-interior-decoration/>
5. <https://designingidea.com/types-of-flooring-materials-for-interior-design/>
6. <https://homedesignlover.com/interior-design/choosing-flooring-materials/>
7. <https://happho.com/different-materials-used-flooring/>
8. <https://theconstructor.org/environmental-engg/methods-of-solid-waste-disposal/4721/>
9. <https://www.conserve-energy-future.com/sources-effects-methods-of-solid-waste-management.php>

#### COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
<b>UNIT 1 – HOUSE PLAN</b>				
1.1	Floor Plan- Meaning Introduction	2	Chalk & Talk	Black Board
1.2	Floor plan- low Income plan	3	Chalk &Talk	LCD
1.3	Medium Income plan	2	Lecture	PPT & White board
1.4	High Income plan	2	Lecture	Smart Board
1.5	Double Storied Plan	1	Discussion	Black Board
<b>UNIT -2 Interior Designing</b>				
2.1	Clearance spaces – Introduction	1	Lecture	Black board

2.2	Living room-dining room	2	Chalk & Talk	PPT
2.3	Dining room- bed room	1	Lecture	PPT & White board
2.4	Kitchen lay out-bath room	2	Discussion	PPT
<b>UNIT -3 Floor coverings</b>				
3.1	Floor coverings - Introduction	1	Lecture	Black board
3.2	Definition- Selection of floor coverings	1	Lecture	Black board
3.3	Types of floor coverings	2	Chalk & Talk	PPT
3.4	Landscaping	1	Chalk & Talk	PPT
<b>UNIT -4 Window Treatments</b>				
4.1	Introduction and meaning	2	Lecture	Black board
4.2	Concept- Types of Windows	2	Chalk & Talk	PPT
4.3	Types of Window Treatments	1	Lecture	PPT & White board
<b>UNIT -5 Vastu in Interiors</b>				
5.1	<b>Self -study -Floor plan</b>	1	Lecture	LCD
5.2	<b>Basics of Vastu</b>	1	Discussion	Black board
5.3	<b>Feng Shui Application</b>	3	Lecture	PPT & White board
5.4	<b>Feng Shui Accessories</b>	1	Discussion	PPT & White board

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks	CIA Total
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							C6	
	T1	T2	Quiz	Assignment	OBT/PPT			
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40Mks.
K1	2	2	-	-	-	4	-	4
K2	2	2	5	-	-	9	-	9
K3	3	3	-	-	5	11	-	11
K4	3	3	-	5	-	11	-	11
Non Scholastic	-	-	-	-	-		5	5
Total	10	10	5	5	5	35	5	40

CIA	
Scholastic	35
Non Scholastic	5
	40

All the course outcomes are to be assessed in the various CIA components.

The levels of CIA Assessment based on Revised Bloom's Taxonomy for UG are:

**K1-** Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

## EVALUATION PATTERN

SCHOLASTIC					NON – SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

**C1** – Internal Test-1

**C2** – Internal Test-2

**C3** - Quiz

**C4** – Assignment

**C5** - OBT/PPT

**C6** – Non – Scholastic

### COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Construct floor plan for different income groups.	K3,K4	PSO17
CO 2	Classify the concept of interior design	K2, K4	PSO17
CO 3	Describe the concepts of landscaping.	K2	PSO17
CO 4	Identify the different types of windows treatments	K3	PSO17
CO 5	Explain the application of Vastu in interior	K1,K2	PSO17

### Mapping of COs with PSOs

CO/	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO	PSO
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CBCS Curriculum for B.Sc. Home Science with Food Biotechnology

PSO	1	2	3	4	5	6	7	8	9	10	11	12
CO1	1	1	1	1	1	1	1	1	1	1	1	1
CO2	1	1	1	1	1	1	1	1	1	1	1	1
CO3	1	1	1	1	1	1	1	1	1	1	1	1
CO4	1	1	1	1	1	1	1	1	1	1	1	1
CO5	1	1	1	1	1	1	1	1	1	1	1	1
CO/ PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO1	1	1	1	1	3	1	3	3	1	1	1	
CO2	1	1	1	1	3	2	3	3	1	1	1	
CO3	1	1	1	1	3	1	3	3	1	1	1	
CO4	1	1	1	1	3	1	3	3	1	1	1	
CO5	1	1	1	1	3	1	3	3	1	1	1	

**Mapping of COs with POs**

CO/ PSO	PO1	PO2	PO3	PO4
CO1	1	1	1	1
CO2	1	1	1	1
CO3	1	1	1	1
CO4	1	1	1	3
CO5	1	1	1	1

**Note:** ♦ Strongly Correlated – 3      ♦ Moderately Correlated – 2  
 ♦ Weakly Correlated -1

**COURSE DESIGNER:**

**1. Dr. C. Priyalatha**

**Forwarded By**

A handwritten signature in black ink, reading "Vasantha Esther Rani". The signature is written in a cursive, flowing style.

(Dr.Vasantha Esther Rani)

**SEMESTER –VI***For those who joined in 2021 onwards*

PROGRAMME CODE	COURSE CODE	COURSE TITLE	HRS/WEEK	CREDITS
UAHS	21UG6SLN	HOSPITAL MANAGEMENT		2

**COURSE DESCRIPTION**

Self-Learning Course on Hospital Management includes the structure and functions of health care systems. Students can possess in-depth knowledge about services provided in the hospital settings

**COURSE OBJECTIVES**

To understand the hospital as the agency for the practice of health care.

To equip the learners as professional hospital administrators.

**UNIT –I HOSPITALADMINISTRATION**

Hospital: Definition, Meaning, Functions, History, Growth and Classification of hospitals in India – Role of Hospital in the Health Care Delivery Systems.

**UNIT –II MANAGEMENT CONCEPTS**

Management-Definition, Principles of management, Functions of management.

**UNIT –III HOSPITALORGANIZATION**

Hospital Organization: Meaning – Functions of Governing Board – Role and Functions of Hospital Administrator – Hospital Auxiliary Services.

**UNIT –IV HOSPITAL DEPARTMENTS**

Hospital Departments: Types and Role of Out-Patient, Dietary Services, Nursing Services, Medical Records, Laboratory Services, Radiological Services, Emergency Services-Human Resource Management Department, Geriatric Care Department.

**UNIT –V QUALITY ASSURANCE IN HOSPITAL SETTINGS**



Quality Assurance in Hospital Service – Control of Hospital Acquired Infection and Associated Problems – National Accreditation Board for Hospitals and Health Care Providers (NABH).

### REFERENCES:

1. Park K Park, “Text book of Preventive and Social Medicine, BanarsidarBhanotPublishers, 2007
2. Goel S L, “Hospital Administration and Management: TheoryandPractice”,Deep& Deep Publications, NewDelhi(2007).
3. Goyal RC, “Hospital Administration and Human Resource Management”, Prentice Hall of India, NewDelhi(2005).

### Digital Open Educational Resources (DOER) :

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5627783/>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1984815/>

Levels	C1	C2	C3	C4	Total Scholastic Marks	Non Scholastic Marks C5	CIA Total	% of Assessment
	Session - wise Average 5 Mks.	Better of W1, W2 5 Mks	M1+M2 5+5=10 Mks.	MID-SEM TEST 15 Mks	35 Mks.	5 Mks.	40Mks.	
K1	5	-	-	2 ½	7.5	-	7.5	18.75
K2	-	5	4	2 ½	11.5	-	11.5	28.75
K3	-	-	3	5	8	-	8	20 %
K4	-	-	3	5	8	-	8	20 %
Non Scholastic	-	-	-	-		5	5	12.5 %
Total	5	5	10	15	35	5	40	100 %

CIA

Scholastic	;
Non Scholastic	;
	;

## EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
10	10	5	5	5	5	40	60	100

### UG CIA Components

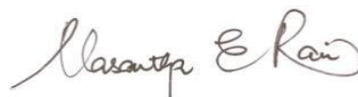
		Nos	
<b>C1</b>	- Test (CIA 1)	1	- 10 Mks
<b>C2</b>	- Test (CIA 2)	1	- 10 Mks
<b>C3</b>	- Assignment	1	- 5 Mks
<b>C4</b>	- Open Book Test/PPT	2 *	- 5 Mks
<b>C5</b>	- Quiz	2 *	- 5 Mks
<b>C6</b>	- Attendance		- 5 Mks

## COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Identify the basic concepts of	K1	PSO1& PSO2

	management		
CO 2	Summarize the significance of hospital administration	K2	PSO2
CO 3	Determine the functions of hospital organization	K3	PSO2
CO 4	Identify the basic needs and functions of various hospital departments	K1	PSO3
CO 5	Determine the significance of quality assurance in hospitals	K3	PSO3

**COURSE DESIGNER:****3. Staff Name: P. Jesintha Josephine Julie****4. Staff Name: P. Magdalene Virjini****Forwarded By**


(Dr.Vasantha Esther Rani)

**HOD'S Signature & Name**