

FATIMA COLLEGE (AUTONOMOUS)



**Re-Accredited with “A” Grade by NAAC (3rd Cycle)
74th 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 : 2022-2023

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)

| | |
|--------------|---|
| PEO 1 | 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 |
| PEO 2 | The skills acquired through Home Science education enable the home scientists to fit various job roles in addition to becoming successful young entrepreneurs |
| PEO 3 | They will be socially responsible citizens by exhibiting their professional competence by involving in lab to land programmes at regional, national, and international levels |
| PEO 4 | 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:

| I. SOCIAL COMPETENCE | |
|-----------------------------|---|
| GA 1 | Deep disciplinary expertise with a wide range of academic and digital literacy |
| GA 2 | Hone creativity, passion for innovation and aspire excellence |
| GA 3 | Enthusiasm towards emancipation and empowerment of humanity |
| GA 4 | Potentials of being independent |
| GA 5 | Intellectual competence and inquisitiveness with problem solving abilities befitting the field of research |
| GA 6 | Effectiveness in different forms of communications to be employed in personal and professional environments through varied platforms |
| GA 7 | Communicative competence with civic, professional, and cyber dignity and decorum |
| GA 8 | Integrity respecting the diversity and pluralism in societies, cultures, and religions |
| GA 9 | All – inclusive skill sets to interpret, analyze, and solve social and environmental issues in diverse environments |
| GA 10 | 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 |

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

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

| | |
|-------------|---|
| PO 1 | Apply acquired scientific knowledge to solve complex issues |
| PO 2 | Attain Analytical skills to solve complex cultural, societal, and environmental issues. |
| PO 3 | Employ latest and updated tools and technologies to analyze complex issues. |
| PO 4 | 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

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

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

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

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 |
| | | | Total | 20 | 12 | | | |

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 - | 5 | 3 | 40 | 60 | 100 |
| 2. | II | 19DL2C2 | PART 1 LANGUAGE HINDI | 5 | 3 | 40 | 60 | 100 |
| 3. | III | 19DL3C3 | PART 1 LANGUAGE HINDI - | 5 | 3 | 40 | 60 | 100 |
| 4. | IV | 19DL4C4 | PART 1 LANGUAGE HINDI - | 5 | 3 | 40 | 60 | 100 |
| | | | Total | 20 | 12 | | | |

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. | I | 19EL1LB | BASIC COMMUNICATIVE ENGLISH | 5 | 3 | 40 | 60 | 100 |
| 2. | | 19EL1LI | INTERMEDIATE COMMUNICATIVE ENGLISH | 5 | 3 | 40 | 60 | 100 |
| 3. | | 19EL1LA | ADVANCED COMMUNICATIVE ENGLISH | 5 | 3 | 40 | 60 | 100 |
| 4. | II | 19EL2LB | ENGLISH COMMUNICATION SKILLS (BASIC) | 5 | 3 | 40 | 60 | 100 |
| 5. | | 19EL2LI | ENGLISH FOR EMPOWERMENT (INTERMEDIATE) | 5 | 3 | 40 | 60 | 100 |
| 6. | | 19EL2LA | ENGLISH FOR CREATIVE WRITING (ADVANCED) | 5 | 3 | 40 | 60 | 100 |
| 7. | III | 19EL3LN | ENGLISH FOR DIGITAL ERA | 5 | 3 | 40 | 60 | 100 |
| 8. | IV | 19EL4LN | ENGLISH FOR INTEGRATED DEVELOPMENT | 5 | 3 | 40 | 60 | 100 |
| | | | Total | 20 | 12 | | | |

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 |

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

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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. | Total | 84 | 60 | | | |
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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 |

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

| COURSE CODE | COURSE TITLE | HR S. | CRE DITS | SEME STER IN WHIC H THE COUR SE IS OFFE RED | CIA Mks | ES E Mks | TOT AL Mks |
|--------------|--|----------------|-----------|---|---------|----------|------------|
| | department of PGDCA for Shift I) | | | | | | |
| 21USDFCS | ONLINE SELF LEARNING COURSE- 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 | HUMAN RIGHTS | 15 | 2 | V | 100 | - | 100 |
| 21UAD6RS | OUTREACH PROGRAMME- Reach Out to Society through Action ROSA | 100 | 3 | V & VI | 100 | - | 100 |
| 21UAD6PR | PROJECT | 30 | 4 | VI | 40 | 60 | 100 |
| 21UAD6RC | READING CULTURE | 10/ Se mes ter | 1 | II-VI | - | - | - |
| TOTAL | | | 20 | | | | |

SELF LEARNING EXTRA CREDIT COURSES

| COURSE CODE | COURSE | HR S. | CREDI TS | SEMES TER IN WHICH THE COURSE IS OFFER ED | CIA MK S | ES E MK S | TOTA L MAR KS |
|--------------------|---|--------------|-----------------|--|-----------------|------------------|----------------------|
| 21UG1SLN | SELF LEARNING COURSES for ADVANCED LEARNERS Nutrition for Health and Fitness | | 2 | I | 40 | 60 | 100 |
| 21UG2SLS | Basics of Psychology | - | 2 | II | 40 | 60 | 100 |
| 21UG4SLZ | Public Health and Hygiene | | 2 | IV | 40 | 60 | 100 |
| 22UG4SLN | Textile Colouration | | 2 | IV | 40 | 60 | 100 |
| 21UG5SLA | Consumerism | | 2 | V | 40 | 60 | 100 |
| 21UG6SLN | Hospital Management | | 2 | VI | 40 | 60 | 100 |

OFF CLASS PROGRAMMES

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

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

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*, (6th 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 |
|---|---|-----------------|-------------------|-------------------|
| UNIT -1 CONCEPT OF HOME SCIENCE AND GROWTH & DEVELOPMENT | | | | |
| 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 |
| UNIT -2 DEVELOPMENT STAGES (Birth – Infancy) | | | | |
| 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 |
| UNIT -3 DEVELOPMENTAL STAGES (Early Childhood) | | | | |
| 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 |
| UNIT -4 DEVELOPMENTAL STAGES (Middle Childhood - Adolescence) | | | | |
| 4.1 | Middle Childhood (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 |
| UNIT -5 CHILDHOOD PROBLEMS | | | | |

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|-----|--|---|--------------|--------------------|
| 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 |

| | 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 |

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

| | | | | | | | | |
|-----------------------|-----------|-----------|----------|----------|----------|-----------|----------|-----------|
| 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 |
| TOTAL | 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

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 |
| CO3 | Explain the developmental changes occur in different stages of humanlifespan. | 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 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| CO1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 |
| CO2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 |

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

| | | | | | | | | | | | | |
|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---|
| CO3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 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 | 3 |
| 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| CO2 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | |
| CO3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| CO4 | 3 | 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 | 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 O₂ and CO₂ 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:

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*, 4th Edition, W.B.Sanders Company, Philadelphia.
3. Guyton,A.C, and Hall,J.B.(2010).*Text Book of Medical Physiology*, 9th 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*, 4th Edition , Jaypee Brothers Medical Publishers Ltd, New Delhi .
6. Sujit E. Chaudhuri(2008). *Concise medical physiology*, 6th 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*, Yajpee 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&
5. <https://open.umn.edu/opentextbooks/textbooks/169>

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|---|-----------------|-----------------------|-----------------------------|
| UNIT -1 DIGESTIVE AND EXCRETORY SYSTEM | | | | |
| 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 |
| UNIT -2 BLOOD AND CIRCULATORY SYSTEM | | | | |
| 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 |
| UNIT -3 RESPIRATORY SYSTEM | | | | |
| 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 ₂ and CO ₂ 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. |
| UNIT IV REPRODUCTIVE AND ENDOCRINE SYSTEM | | | | |
| 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 |
| UNIT V SENSE ORGANS AND NERVOUS SYSTEM | | | | |
| 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®ulation 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

| | |
|-----------------------|-----------|
| 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

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

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 | 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 |

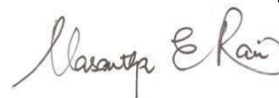
| | | | | |
|-----|---|---|---|---|
| CO5 | 2 | 2 | 1 | 3 |
|-----|---|---|---|---|

**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*, 9th 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 - Comprehensive explanation of basic cardiovascular concepts simple.wikipedia.org/wiki/Digestion - 17k
2. www.medicalnewstoday.com/articles/11949.php - 59k

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lab hours | Teaching Pedagogy | Teaching Aids |
|------------------------------------|--|------------------|--------------------------------------|--|
| UNIT – HISTOLOGY | | | | |
| 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 |
| UNIT -2 BLOOD CELLS | | | | |
| 2.1 | Blood Cells — Fresh mount and stained | 5 | Demonstration | Specimen slides. |
| 2.2 | Differential Count | 5 | Demonstration | Specimen slides. |
| UNIT -3 RBC & WBC COUNT | | | | |
| 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 |
| UNIT 4 HAEMOGLOBIN ANALYSIS & BLOOD GROUPING | | | | |
| 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 |
| UNIT 5 BLOOD COAGULATION & BLOOD PRESSURE | | | | |
| 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 | |

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

| | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|--|
| 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 | P01 | P02 | P03 | P04 |
|----------------|------------|------------|------------|------------|
| 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 |

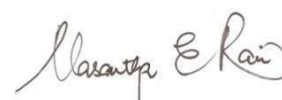
Note: Strongly Correlated – 3, Moderately Correlated – 2

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, B₁, B₂, B₃, B₆, B₁₂, 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 |
|-------------------------------------|--|------------------|-------------------|---------------|
| UNIT -1 NUTRITION AND HEALTH | | (12 HRS.) | | |
| 1.1 | Definition – Health, Nutrition, Malnutrition, Adequate Nutrition | 1 | Chalk & Talk | Black Board |

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

| | | | | |
|--|---|---|--------------|-------------|
| 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 |
| UNIT -2 FOOD (12 HRS.) | | | | |
| 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 |
| UNIT -3 MACRO NUTRIENTS AND HEALTH(12 HRS.) | | | | |
| 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 |
| UNIT -4 MICRO NUTRIENTS AND HEALTH | | | | |
| 4.1 | Vitamin A, D, E, K - Definition, Functions, sources, Deficiency | 2 | Chalk & Talk | Black Board |

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

| | | | | |
|-----------------------------------|--|---|---------------|-------------|
| | diseases, signs & symptoms | | | |
| 4.2 | Vitamin B ₁ , B ₂ , B ₃ , B ₆ , B ₁₂ , 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 |
| UNIT -5 COOKING AND HEALTH | | | | |
| 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. |
| K1 | 2 | 2 | - | - | - | 4 | - | 4 |

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

| | | | | | | | | |
|----------------|----|----|---|---|---|----|---|----|
| 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 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 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 | 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 C0s 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 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 for 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:

Gupta L. C. & Kusium Gupta (1989). *Foods and Nutrition, Facts and Figures*, Jayapahothas, New Delhi,

- 1 Swaminathan M. (1988) *Advanced textbook of Food and Nutrition*, Vol. I and II, the Bangalore Printing and Publishing Co., Ltd.
- 2 Gitanjali Chatterjee, (1999) *Handbook of Nutrition*, Rajat Publications.
- 3 Srilakshmi. B.(2007). *Food Science*, New age International Pvt.Ltd.,NewDelhi.

OPEN EDUCATIONAL REFERENCES :

1. 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 |
|--|---|-----------------|-------------------|-----------------------|
| UNIT -1 HOLISTIC APPROACH TO FITNESS AND HEALTH | | | | |
| 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 |
| UNIT -2 ENERGY SYSTEMS | | | | |
| 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 |
| UNIT -3 CASE STUDIES AND DIET MODIFICATIONS | | | | |
| 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 |
| UNIT - 4 PHYSICAL FITNESS AND HEALTH INTER-RELATIONSHIPS | | | | |
| 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 |
| UNIT-5 ALTERNATIVE SYSTEMS OF HEAL WAND FITNESS | | | | |

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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

| 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



(Dr.Vasantha Esther Rani)

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 B₆, vitamin B₁₂.

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:

TEXT BOOKS

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.

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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 |
|-------------------------------|--|------------------------|--------------------------------------|-------------------------------|
| UNIT -1 ENERGY | | | | |
| 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 | | | |
| UNIT -2 MACRONUTRIENTS | | | | |
| 2.1 | Carbohydrates - Classification, functions, digestion, absorption, metabolism | 4 | Chalk & Talk Lecture | Black/White board |

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|-------------------------------|--|---|--------------------------|--------------------------|
| 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 |
| UNIT -3 MICRONUTRIENTS | | | | |
| 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 |

| UNIT -4 WATER AND FIBRE | | | | |
|---|--|---|-----------------------------------|---|
| 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 |
| UNIT -5 ANTIOXIDANTS AND NUTRIGENOMICS | | | | |
| 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 |
|-------|----|----|----|----|----|------------------------|-------------------------|-----------|
|-------|----|----|----|----|----|------------------------|-------------------------|-----------|

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

| | 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 |
| TOTAL | 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 - | MARKS |
|------------|-------|-------|
|------------|-------|-------|

| | | | | | 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 |
|------|---|----|-------------------|

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 |

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

| | | | | |
|------------|---|---|---|---|
| CO4 | 3 | 1 | 1 | 3 |
| CO5 | 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*

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

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.)**

CBCS Curriculum for B.Sc. Home Science with Food Biotechnology
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. ShankuntalaO.Manay (2005). *Food: Facts and Principles*, New age International Pvt.Ltd, NewDelhi.

OPEN EDUCATIONAL RESOURCES:

[http://:www.nin.res.in](http://www.nin.res.in)

[http://: www.cftri.res.in](http://:www.cftri.res.in)

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

<http://:www.afsti.org>

<http://:www.icfost.org>

CBCS Curriculum for B.Sc. Home Science with Food Biotechnology
COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|--|-----------------|-------------------|---------------|
| UNIT -1 BASIC CONCEPTS AND RECENT TRENDS IN FOOD SCIENCE | | | | |
| 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 |
| UNIT -2 CEREALS, PULSES, FRUITS & VEGETABLES | | | | |
| 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 |

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

| | | | | |
|-----|---|---|---------------|--------------------------------------|
| 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 |

UNIT -3 MEAT, POULTRY & FISH

| | | | | |
|-----|--|---|---------|-----|
| 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 |

UNIT -4 EGG, MILK & MILK PRODUCTS

| | | | | |
|-----|---|---|--------------|-------------|
| 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 |
| UNIT -5 SPICES, CONDIMENTS, NUTS, OILSEEDS & BEVERAGES | | | | |
| 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 |
|--------|----|----|----|----|----|------------------------|----------------------|-----------|
|--------|----|----|----|----|----|------------------------|----------------------|-----------|

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 |
|---------|-----|-----|-----|-----|
|---------|-----|-----|-----|-----|

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

| | | | | |
|------------|---|---|---|---|
| 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)

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 |
|-----------------------|--------------------|---------------------------------------|------------------|-----------------|----------------|
| UG-UAHS | 19N2CC6 | FOOD SCIENCE AND NUTRITION LAB | Practical | 3 | 2 |

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 |
|--|--|-----------------|----------------------|------------------------------------|
| UNIT -1 EXPERIMENTAL COOKERY AND PREPARATION OF RECIPES | | | | |
| 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 | | | |
| UNIT -2 QUALITATIVE ANALYSIS OF MONOSACCHARIDE | | | | |
| 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 |
| UNIT -3 QUALITATIVE ANALYSIS OF DISACCHARIDES | | | | |
| 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 |
| UNIT -4 QUALITATIVE ANALYSIS OF NUTRIENTS | | | | |
| 4.1 | Protein | 3 | Lecture cum demonstration | Required chemicals and glass wares |
| 4.2 | Minerals | 2 | Lecture cum demonstration | Required chemicals and |

| | | | | |
|---|----------------|---|---------------------------|------------------------------------|
| | | | | glass wares |
| UNIT -5 QUANTITATIVE ANALYSIS OF NUTRIENTS | | | | |
| 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 |
|-----|-----------------|--|----------------|
|-----|-----------------|--|----------------|

| | | | |
|------|--|--------|------|
| 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 | P01 | P02 | P03 | P04 |
|---------|-----|-----|-----|-----|
| 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 | CREDITS |
|----------------|-------------|----------------------|---------------|---------|
| UAHS | 21UG2SLS | BASICS OF PSYCHOLOGY | SELF LEARNING | 2 |

COURSE DESCRIPTION

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 FACTORS AFFECTING 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) 16th Reprint General Psychology, Sterling Publishers Pvt Ltd, New Delhi India.
2. Morgon T Clifford, King A Richard et all (2005) 28th Reprint, Introduction to Psychology,
3. Tata McGraw – Hill Publishing Company Ltd, New Delhi.
4. 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

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

COURSE OUTCOMES

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

Mapping of COs with PSOs

| CO / PS O | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 | PSO6 | PSO7 | PSO8 | PSO9 | PSO10 | PSO11 |
|------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CO 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| CO 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| CO 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 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 |
| 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

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

| CO/ PSO | P01 | P02 | P03 | P04 |
|---------|-----|-----|-----|-----|
| CO1 | 3 | 1 | 1 | 1 |
| CO2 | 1 | 1 | 1 | 1 |
| CO3 | 1 | 1 | 2 | 1 |
| CO4 | 1 | 1 | 1 | 3 |
| CO5 | 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*

| PROGRAMME CODE | COURSE CODE | COURSE TITLE | CATEGORY | HRS/WE EK | CREDITS |
|----------------|-------------|---------------------------------------|----------|-----------|---------|
| UAHS | 19N3CC7 | EXTENSION EDUCATION AND COMMUNICATION | Lecture | 5 | 4 |

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

| | | |
|--|---------------------------------|-----------------|
| UNIT – I | EXTENSION EDUCATION | [15 HRS] |
| 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. | | |
| UNIT – II | WOMEN WELFARE PROGRAMMES | [15 HRS] |
| RMK, IMY, MGNREGS, PMRY & National livelihood programme, National Rural livelihood mission, National Social Assistance Scheme ,TRYSEM, DWCRA, SHG, Women Welfare Programmes | | |
| UNIT – III | COMMUNICATION | [15 HRS] |

Communication Definition, Meaning, Objectives & Principles

Self Study-Elements of communication, barriers to communication

| | | |
|------------------|-----------------------------------|-----------------|
| UNIT – IV | EXTENSION TEACHING METHODS | [15 HRS] |
|------------------|-----------------------------------|-----------------|

Meaning and teaching, Classification of extension teaching methods

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

| | | |
|-----------------|--------------------------|-----------------|
| UNIT – V | AUDIO-VISUAL AIDS | [15 HRS] |
|-----------------|--------------------------|-----------------|

Definition, Classification, criteria for selection and evaluation of audiovisual aids & Cone of Experience.

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

- i. Projected: Slides, filmstrip, opaque projection, overhead projection.
- ii. 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&Batnagar O.P.(1980) *Education and communication for Development*, Oxford Pub., New Delhi.
2. Roy, G.L. (1994). *Extension Communication and Management*, New Delhi,

OPEN EDUCATIONAL RESOURCES:

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>
9. https://en.wikipedia.org/wiki/Welfare_schemes_for_women_in_India
10. <https://wcd.nic.in/sites/default/files/24-05010215wcdmedia.pdf>

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|--|-----------------|-------------------|-------------------|
| UNIT 1 –Extension Education | | | | |
| 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 |
| UNIT -2 WOMEN WELFARE PROGRAMMES | | | | |
| 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 |
| UNIT -3 COMMUNICATION | | | | |
| 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 |
| UNIT -4 EXTENSION TEACHING METHODS | | | | |
| 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 |
| UNIT -5 AUDIO- VISUAL AIDS | | | | |
| 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 | Audio Aids: E- Communication methods, Public address system, Radio | 3 | Lecture | PPT & White board |
| 5.4 | Visual Aids: Projected: Slides, filmstrip, opaque projection, overhead projection. | 3 | Lecture | PPT & White board |
| 5.5 | Visual Aids: Non - projected: Chalkboard, Bulletin board, flannel graph, flash card, poster diagram, map, chart, graph, specimen and models. | 5 | Chalk & Talk | LCD |

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| | | | | |
|-----|--|---|------------|-----|
| 5.6 | Audio visual aids: 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 |

| | | | | | | | | |
|----------------|----|----|---|---|---|----|---|----|
| 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 concepts of Home Science Extension Education. | K1 | PSO22 |

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

| | | | |
|------|---|--------|-------|
| CO 2 | Describe the various welfare-programmes for women | K2, K3 | PSO22 |
| CO 3 | Explain the principles and modelsof 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 |

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

Mapping of COs with POs

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

Note: ♦ Strongly Correlated – 3 ♦ Moderately Correlated

COURSE DESIGNER:

Dr. C. Priyalatha

Forwarded By



(Dr.Vasantha Esther Rani)

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

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

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 |
|---|---|-----------------|-------------------|---------------|
| UNIT -1 CLASSIFICATION AND MANUFACTURING PROCESS OF TEXTILE FIBRES | | | | |
| 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 |
| UNIT -2 FIBRE IDENTIFICATION, PROPERTIES AND SPINNING | | | | |
| 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 |
| UNIT – 3 FABRIC MANUFACTURING TECHNIQUES | | | | |
| 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 |
| UNIT – 4 FABRIC FINISHING | | | | |
| 4.1 | Singeing, Scouring | 1 | Chalk & Talk | Black Board |
| 4.2 | Bleaching, Mercerising, Sizing | 2 | Chalk & Talk | Black Board |
| 4.3 | Calendering, Tentering | 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 |

| | | | | |
|-------------------------------------|---|---|--------------|-------------|
| UNIT – 5 DYEING AND PRINTING | | | | |
| 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 |

| | | | | | | | | | |
|--|----|----|----|----|----|------------------------|-------------------------|-----------|--|
| | C1 | C2 | C3 | C4 | C5 | Total Scholastic Marks | Non Scholastic Marks C6 | CIA Total | |
|--|----|----|----|----|----|------------------------|-------------------------|-----------|--|

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

| Levels | T1 10 Mks . | T2 10 Mks . | Qui z 5 Mks . | Assignme nt 5 Mks | OBT/PP T 5 Mks | 35 Mks. | 5 Mks. | 40Mks . | % of Assesse ment |
|--------|----------------------|----------------------|---------------------------|-------------------------|----------------------|---------|--------|------------|-------------------------|
| 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 | 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 |

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

| | | | |
|------|--|--------|------|
| 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 |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----|-----|-----|
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----|-----|-----|

| | | | | | | | | | | 10 | 11 | 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

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

| CO/ PSO | PO1 | PO2 | PO3 | PO4 |
|---------|-----|-----|-----|-----|
| CO1 | 1 | 1 | 2 | 1 |
| CO2 | 1 | 1 | 2 | 1 |
| CO3 | 1 | 1 | 2 | 1 |
| CO4 | 1 | 2 | 2 | 2 |
| CO5 | 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 |
|-----------------|---|-----------------|-------------------|----------------|
| UNIT -1 | | | | |
| 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 |
| UNIT - 2 | | | | |
| 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 |
| UNIT - 3 | | | | |
| 3.1 | Fullness: Darts, Tucks, Pleats | 5 | Demonstration | Sewing machine |
| 3.2 | Gathers and Shirrs | 5 | Demonstration | Sewing machine |

| UNIT - 4 | | | | |
|----------|--------------------------------------|---|---------------|----------------|
| 4.1 | Edge finishing: Bias binding, facing | 5 | Demonstration | Sewing machine |
| 2.2 | Types of hems | 5 | Demonstration | Sewing machine |
| UNIT - 5 | | | | |
| 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 | |

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

| | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|--|
| 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

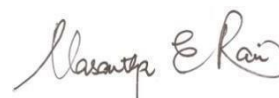
| CO/ PSO | PO1 | PO2 | PO3 | PO4 |
|----------------|------------|------------|------------|------------|
| CO1 | 1 | 1 | 1 | 2 |
| CO2 | 1 | 1 | 1 | 2 |
| CO3 | 1 | 1 | 1 | 2 |
| CO4 | 1 | 1 | 1 | 2 |
| CO5 | 1 | 1 | 1 | 2 |

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

COURSE DESIGNERS:

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

Forwarded By



(Dr.Vasantha Esther Rani)

CBCS Curriculum for B.Sc. Home Science with Food Biotechnology
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 | 19N3AC1 | CATERING AND HOTEL MANAGEMENT | Lecture | 3 | 3 |

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

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>

CBCS Curriculum for B.Sc. Home Science with Food Biotechnology
COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|--|---|-----------------|-------------------|---------------|
| UNIT -1 INTRODUCTION TO HOTEL INDUSTRY | | | | |
| 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 |
| UNIT -2 FRONT OFFICE MANAGEMENT | | | | |
| 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 |
| UNIT -3 HOTEL RESERVATION AND RECEPTION | | | | |

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

| | | | | |
|--|---|---|--------------|-------------|
| 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 |
| UNIT -4 HOUSEKEEPING MANAGEMENT | | | | |

| | | | | |
|-----|--|---|--------------|-------------|
| 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 |
| UNIT -5 CLEANING AND LAUNDRY MANAGEMENT | | | | |
| 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 |
|--------|--------|--------|--------|------------|----------|------------------------|-------------------------|-----------|-----------------|
| | 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 % |

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

| | | | | | | | | | |
|-----------------------|-----------|-----------|----------|----------|----------|-----------|----------|-----------|---------------|
| 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

3 - 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 |

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

| | | | | | | | | | | | | |
|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---|
| 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 | 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 |

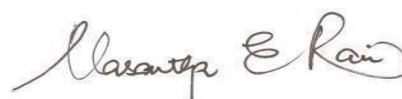
Note: ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2 ♦

Weakly Correlated -1

COURSE DESIGNER:

- Mrs. P. Magdalene Virjini**
- 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

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 |
|---|--|-----------------|-------------------|----------------------------------|
| UNIT -1 HOTEL ORGANIZATION | | | | |
| 1.1 | Identification of organization structure of different star hotels. | 6 | Chalk & Talk | Sample Hotel Records & Brochures |
| UNIT -2 RESERVATION AND REGISTRATION | | | | |
| 2.1 | Reservation and registration procedure layout. | 6 | Demonstration | Sample Hotel Registers and Files |
| UNIT -3 BED MAKING | | | | |

| | | | | |
|---------------------------------------|-----------------------|---|---------------|---------------------|
| 3.1 | Bed making procedure. | 6 | Demonstration | Essential Materials |
| UNIT -4 FRONT OFFICE OPERATION | | | | |

| | | | | |
|-----------------------------|---|---|---------------|---------------------|
| 4.1 | Exhibiting front office process. | 6 | Role Play | Essential Materials |
| UNIT -5 HOUSEKEEPING | | | | |
| 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 |
|------|---|---|----------------|
| | | (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 | |

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

| | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|--|
| 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

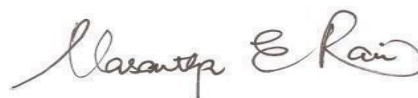
| CO/ PSO | P01 | P02 | P03 | P04 |
|----------------|------------|------------|------------|------------|
| CO1 | 1 | 1 | 1 | 2 |
| CO2 | 1 | 1 | 1 | 2 |
| CO3 | 1 | 1 | 1 | 2 |
| CO4 | 1 | 1 | 1 | 2 |
| CO5 | 1 | 1 | 1 | 2 |

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

COURSE DESIGNER:

- Mrs. P. Magdalene Virjini**
- 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*

| PROGRAM ME CODE | COURSE CODE | COURSE TITLE | CATEGORY | HRS/WEE K | 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 |
|-----------------|--|-----------------|-------------------|---------------|
| UNIT -1 | | | | |
| 1.1 | Development of design | 3 | Chalk & Talk | Black Board |
| 1.2 | Application of elements and principles of design | 3 | Lecture | LCD |
| UNIT – 2 | | | | |
| 2.1 | Basic hand stitches | 3 | Lecture | PPT |
| 2.2 | Chain, Back, Satin, Long & short, Feather | 3 | Lecture | PPT |
| UNIT – 3 | | | | |
| 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 |
| UNIT – 4 | | | | |
| 4.1 | Study of paints and brush | 3 | Lecture | White Board |
| 4.2 | Different methods of painting | 3 | Lecture | PPT |
| UNIT – 5 | | | | |

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/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 % |

| | |
|----------------|----|
| | 35 |
| CIA | |
| Scholastic | |
| 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 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 | PO1 | PO2 | PO3 | PO4 |
|---------|-----|-----|-----|-----|
| 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

*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

Park J.E., (2017). *Textbook Of Preventive Social Medicine* 24 Th Edition. Banarsidas Bhanot Publishers.

1. Vidhya R., (2002). *Hand Book of Preventive and Social Medicine*. **Publisher:** JPB; Ninth edition
2. Sudhar R., Wagh P., Vinod B., Kakade, Jiwan P.S., (2015). *Public Health*
3. *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*
6. *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 – 20 Marks | Essay Type Qns. – 40 Marks |

| | | | |
|-------|-----------|-------|-----------|
| Total | - 40Marks | Total | - 60Marks |
|-------|-----------|-------|-----------|

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


♦ Moderately Correlated – 2

Weakly Correlated -1

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

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

For those who joined in 2019 onwards

| PROGRAM ME CODE | COURSE CODE | COURSE TITLE | CATEGORY | HRS/WEEK | CREDIT S |
|-----------------------|----------------|---------------------------------|----------|----------|-------------|
| 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.)

CBCS Curriculum for B.Sc. Home Science with Food Biotechnology
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 |
|--|--|------------------------|--------------------------|----------------------|
| UNIT 1 - BIOTECHNOLOGICAL APPROACHES IN FOOD PROCESSING | | | | |
| 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 |
| UNIT -2 BASICS OF MICROBIOLOGY | | | | |

| | | | | |
|---|--|---|--------------|-------------------|
| 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 |
| UNIT -3 PRODUCTION OF CULTURES FOR FOOD FERMENTATION | | | | |
| 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 |
| UNIT -4 FERMENTATION TECHNOLOGY | | | | |
| 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 |
| UNIT -5 SINGLE CELL PROTEIN | | | | |
| 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 10 Mks . | T2 10 Mks . | Quiz 5 Mks . | Assignment 5 Mks | OBT/PP T 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 | 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

| | | | | | | | | | | | | |
|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---|
| 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 | PSO2 2 | PSO2 3 | |
| 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 | 3 | 3 | 3 | 1 |
| CO3 | 3 | 3 | 3 | 1 |
| CO4 | 3 | 3 | 3 | 1 |
| CO5 | 3 | 3 | 3 | 1 |

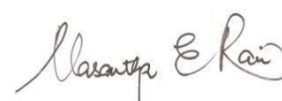
Note: ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2

♦ Weakly Correlated -1

COURSE DESIGNER:

Mrs.J.JosephineJesintha

Forwarded By



(Dr.Vasantha Esther Rani)

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/referenc es/Elements-and-Principles-of-Design.pdf

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|--|--|-----------------|-------------------|---------------|
| UNIT -1 BASICS OF CLOTHING CONSTRUCTION | | | | |
| 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 |
| UNIT – 2 CLOTHING SELECTION, CARE AND WARDROBE PLANNING | | | | |
| 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 |
| UNIT – 3 INTRODUCTION TO FASHION | | | | |
| 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 |
| UNIT – 4 FASHION INDUSTRY AND FASHION PROMOTION | | | | |
| 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 |
| UNIT – 5 FASHION ILLUSTRATION | | | | |
| 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 % |

| | | | | | | | | | |
|-----------------------|-----------|-----------|----------|----------|----------|-----------|----------|-----------|---------------|
| 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 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 | PO1 | PO2 | PO3 | PO4 |
|---------|-----|-----|-----|-----|
| 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 |
|----------------|-----------------------------------|-----------------|-------------------|----------------|
| UNIT -1 | | | | |
| 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 |
| UNIT – 2 | | | | |
| 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 |
| UNIT – 3 | | | | |
| 3.1 | Drawing flesh figure using * head theory | 7 | Demonstration | Black Board |
| UNIT – 4 | | | | |
| 4.1 | Drawing shoes, hand bags | 4 | Demonstration | Black Board |
| 4.2 | Drawing hats and hairstyles | 3 | Demonstration | Black Board |
| UNIT – 5 | | | | |
| 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 |
|-----|---|---|---------|-----|

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 | PSO9 |
| CO 2 | Plan drafting and construct nighty and salwar kameez. | K3 | PSO9 |

| | | | |
|------|--|--------|--------------|
| 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
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:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|--|--|------------------------|--------------------------|----------------------|
| UNIT -1 CLASSIFICATION OF RAW MATERIALS | | | | |
| 1.1 | Aims and objectives of cooking Food | 1 | Chalk & Talk | Black Board |
| 1.2 | Classification of 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 |
| UNIT -2 SOUPS, SAUCES AND SALADS | | | | |
| 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 |
| UNIT -3STANDARDIZATION AND MENU PLANNING | | | | |
| 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 |
| UNIT -IV FOOD AND BEVERAGE SERVICE | | | | |
| 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 |
| UNIT –V MANAGEMENT OF FOOD AND BEVERAGE PRODUCTION DEPARTMENT | | | | |
| 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 |
|-----|-----------------|--|----------------|
|-----|-----------------|--|----------------|

| | | | |
|------|---|----|------|
| 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 | |

| | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|--|
| 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 | 3 |
| CO2 | 1 | 1 | 1 | 3 |
| CO3 | 1 | 1 | 1 | 3 |
| CO4 | 1 | 1 | 1 | 3 |
| CO5 | 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

| PROGR 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

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|---|-----------------|-------------------|-------------------|
| UNIT -I Preparation of soups, salads and desserts | | | | |
| 1.1 | FOOD PREPARATION 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 |
| UNIT -II Main dish (Indian, Continental and Chinese) | | | | |
| 2.1 | Topic 2 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 |
| UNIT -III Side dish (Indian, Continental and Chinese) | | | | |
| 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 |
| UNIT -IV Course menu | | | | |
| 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 |
| UNIT -V Types of service, cover laying, table setting and napkin folding | | | | |
| 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 | COURSE OUTCOMES (CO) 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 |

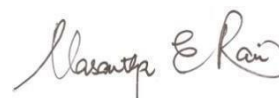
Note: ♦ Strongly Correlated – 3

♦ 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/WE EK | 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 |
|----------------|---|-----------------|-------------------|-------------------------|
| UNIT -1 | | TITLE | | |
| 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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| | | | | | | | | | | | | | |
|----------------|---------------|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|
| CO5 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| CO2 | 1 | | 1 | 1 | 1 | 3 | 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 | 3 | 1 |
| CO2 | 3 | 1 | 3 | 1 |
| CO3 | 2 | 1 | 3 | 1 |
| CO4 | 3 | 1 | 3 | 1 |
| CO5 | 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)

| PROGRAM ME CODE | COURS E CODE | COURSE TITLE | CATEGORY | HRS/W EEK | CREDITS |
|-----------------------|--------------------|------------------------|------------------|--------------|---------|
| UAHS | 22UG4SLN | Textile Colouration | Self Learning | - | 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

C01: To gain knowledge about textile fibres and dyes

C02: To understand the textile coloration process

C03: To develop familiarity with the machinery used for dyeing and the application process

C04: To study the concept of mordant dyes and properties

C05: 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)

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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. Susheela Dhantyagi, '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

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 |
|------------|--------------------|-----------------|-------------------|-----------------|
| UNIT -1 | | TITLE | | |
| 1.1 | FIBRES AND DYES | - | - | MATERIALS GIVEN |
| 2.1 | COLORATION PROCESS | - | - | MATERIALS GIVEN |

| | | | | |
|------------|----------------------------------|---|---|------------------------|
| 3.1 | MACHINERY AND APPLICATION | - | - | MATERIALS GIVEN |
| 4.1 | MORDANT DYES | - | - | MATERIALS GIVEN |
| 5.1 | DISPERSE DYES | - | - | MATERIALS GIVEN |
| 6.1 | DYNAMISM | - | - | MATERIALS GIVEN |

| 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 1 | | PSO 2 | PSO 3 | PSO 4 | PSO 5 | PSO 6 | PSO 7 | PSO 8 | PSO 9 | PSO 10 | PSO 11 | PSO 12 |
|----|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
|----|-------|--|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|

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

| | | | | | | | | | | | | | |
|----------------|---------------|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------|
| 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 |
| CO5 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 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 | 3 | 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 | 3 | 1 |
| CO2 | 3 | 1 | 3 | 1 |
| CO3 | 2 | 1 | 3 | 1 |
| CO4 | 3 | 1 | 3 | 1 |
| CO5 | 3 | 1 | 3 | 1 |

Note: ♦ Strongly Correlated – 3
Correlated -1

♦ Moderately Correlated – 2

♦ Weakly

COURSE DESIGNER:

1.Dr.R.Latha

2.Dr.B.Vinsha

IIIB.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY**SEMESTER –V***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*, (6th 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:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|--|------------------------|--------------------------|----------------------|
| UNIT -1 EARLY CHILDHOOD CARE AND DEVELOPMENT | | | | |
| 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 |
| UNIT -II CRECHE MANAGEMENT | | | | |
| 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 |

| UNIT –III PRESCHOOL EDUCATION | | | | |
|---|--|---|------------------------------|--------------------|
| 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 |
| UNIT –IV PRESCHOOL PROGRAMME | | | | |
| 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 |
| UNIT –V ORGANISATION OF A PRESCHOOL CENTRE | | | | |
| 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 |

| Levels | C1 | C2 | C3 | C4 | C5 | Total Scholastic Marks | Non Scholastic Marks C6 | CIA Total |
|---------------------------|---------------|------------------|----------------|-------------------------|----------------------|------------------------------|----------------------------------|--------------|
| | T1 10 Mks. | T2 10 Mks. | Quiz 5 Mks. | Assignm ent 5 Mks | OBT/P PT 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 | 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

| 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

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

| | | | | | | | | | | | | |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|
| 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 |
| 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 | 1 | | 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 | |

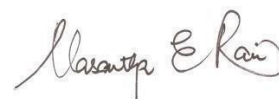
Mapping of COs with Pos

| CO/ PSO | PO1 | PO2 | PO3 | PO4 |
|---------|-----|-----|-----|-----|
| 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 -1

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


(Dr.Vasantha Esther Rani)

IIIB.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY**SEMESTER –V***For those who joined in 2019 onwards*

| PROGRA MME CODE | COURSE CODE | COURSE TITLE | CATEGO RY | 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, Tradepaperback, USA.

COURSE CONTENTS & LECTURE SCHEDULE:

| Modu le No. | Topic | No. of Lectur es | Teaching Pedagogy | Teaching Aids |
|------------------|---|------------------------|---|------------------------|
| UNIT -1 | | | | |
| 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/Demonstr ation | LCD &White board |
| UNIT-II | | | | |
| 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 | |
| UNIT -III | | | | |

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

| | | | | |
|-----------------|---|----|-----------------------------------|--------------------|
| 3.1 | Topic 3 Developing creative activities for Preschool Children | 10 | Chalk & Talk Hands on Experiences | Black Board |
| 3.2 | Subtopic Planning science experience for Preschool Children | 5 | Lecture/ Hands on Experiences | PPT & Black Board |
| 3.3 | Developing a creative Album | 5 | Chalk & Talk Hands on Experiences | LCD & Smart Board |
| UNIT -IV | | | | |
| 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 | |
| UNIT -V | | | | |
| 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 | PSO11& PSO13 |
| CO 2 | Develop skills on the preparation of low-cost play equipment for preschool children | K3 | PSO15 |
| 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

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

| 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 | |

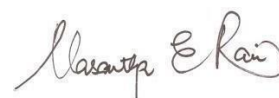
Mapping of COs with Pos

| 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

| | | |
|-----------------|--------------------|-----------------|
| UNIT – I | ART IN HOME | (15 HRS) |
|-----------------|--------------------|-----------------|

Design-Meaning, Types, Characteristics

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

| | | |
|------------------|-----------------------------|-----------------|
| UNIT – II | PRINCIPLES OF DESIGN | (15 HRS) |
|------------------|-----------------------------|-----------------|

Principles of Design – Harmony, Balance, Proportion, Rhythm, Emphasis

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

| | | |
|-------------------|----------------------------------|-----------------|
| UNIT – III | TRENDS IN INTERIOR DESIGN | (20 HRS) |
|-------------------|----------------------------------|-----------------|

Furniture – Selection, use and care, furniture arrangement in various rooms.

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

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

| | | |
|------------------|--------------------------------|-----------------|
| UNIT – IV | HOUSING AND ENVIRONMENT | (20 HRS) |
|------------------|--------------------------------|-----------------|

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.

| | | |
|-----------------|-------------------------------------|----------------|
| UNIT – V | HOUSING DEVELOPMENT IN INDIA | (20HRS) |
|-----------------|-------------------------------------|----------------|

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://www.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 |
|--|---|-----------------|-------------------|-------------------|
| UNIT 1 ART IN HOME | | | | |
| 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 |
| UNIT -2 PRINCIPLES OF DESIGN | | | | |
| 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 |
| UNIT -3 TRENDS IN INTERIOR DESIGN | | | | |
| 3.1 | Furniture – Selection, use and care, Furniture arrangement in various rooms | 4 | Lecture | Black board |

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

| | | | | |
|---|---|---|---------------------------------------|-------------------------|
| 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 |
| UNIT -4 HOUSING AND ITS ENVIRONMENT | | | | |
| 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 |
| UNIT -5 HOUSING DEVELOPMENT IN INDIA | | | | |
| 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 |

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

| | | | | |
|-----|----------------------------|---|------------|-------------|
| 5.4 | Domestic pest and measures | 3 | Discussion | Black Board |
|-----|----------------------------|---|------------|-------------|

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

| | | | | |
|-----|--|---|------------|-------------|
| 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 |

| Levels | C1 | C2 | C3 | C4 | C5 | Total Scholastic Marks | Non Scholastic Marks C6 | CIA Total |
|----------------|---------------|---------------|----------------|---------------------|------------------|------------------------|-------------------------|-----------|
| | 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 | 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 |

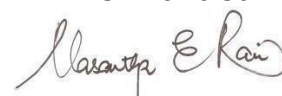
Note: ♦ Strongly Correlated – 3 ♦ Moderately Correlated – 2

♦ 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 |
|----------------|--|-----------------|-------------------|---------------|
| UNIT 1 | | | | |
| 1.1 | Identification of elements and | 5 | Chalk & Talk | Black Board |
| 1.2 | Principles of design on art object. | 5 | Chalk & Talk | Black Board |
| UNIT -2 | | | | |
| 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 |
| UNIT -3 | | | | |
| 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. | | | |
| UNIT -4 | | | | |
| 4.1 | Application of related and contrasting colour harmonies on various crockeries. | 10 | Demonstration, Group work | Crockeries |
| UNIT -5 | | | | |
| 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


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

| CO/ PSO | P01 | P02 | P03 | P04 |
|------------|-----|-----|-----|-----|
| 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:
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
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:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|---|------------------------|--------------------------|----------------------|
| UNIT -1 INTRODUCTION TO TECHNICAL TEXTILES | | | | |
| 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 |
| UNIT -2 GEO TEXTILES | | | | |
| 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 |
| UNIT - 3 MEDICAL TEXTILES | | | | |
| 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 |

| UNIT – IV PROTECTIVE TEXTILES | | | | |
|---|---|---|------------|-----|
| 4.1 | Introduction and types | 5 | Discussion | PPT |
| 4.2 | Short term survival | 5 | Lecture | LCD |
| 4.3 | Long term survival | 5 | Lecture | LCD |
| UNIT – V TRANSPORTATION TEXTILES | | | | |
| 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 | | | 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 | |

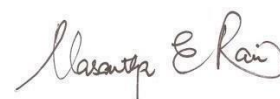
Mapping of COs with POs

| CO/ PSO | PO1 | PO2 | PO3 | PO4 |
|------------|-----|-----|-----|-----|
| CO1 | 3 | 1 | 1 | 1 |
| CO2 | 3 | 3 | 3 | 3 |
| CO3 | 3 | 1 | 3 | 3 |
| CO4 | 3 | 3 | 3 | 3 |
| CO5 | 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
PLICATIONS OF food biotechnology](https://www.researchgate.net/publication/312875936_aPLICATIONS_OF_food_biotechnology)

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|---|------------------------|--------------------------|----------------------|
| UNIT -1 ENZYMES | | | | |
| 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 - a-amylases, lipases, proteases,. | 3 | Lecture | Smart Board |
| 1.5 | Use of enzymes in food industry – Proteases, glucose oxidase, catalase, lactase | 4 | Lecture | Black Board |
| UNIT -2 ENZYMES IN FRUIT JUICES AND BREWING INDUSTRY | | | | |
| 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 |
| UNIT -3FOOD ADDITIVES | | | | |
| 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 |

| | | | | |
|--|--|---|--------------|-------------------|
| UNIT -4 FOOD AND PLANT,ANIMAL BIOTECHNOLOGY | | | | |
| 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 |
| UNIT -5GENETICALLY MODIFIEDFOODS | | | | |
| 5.1 | Basic concepts of DNA structure | | Lecture | PPT & |

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

| | | | | |
|-----|--|---|--------------|-------------------|
| | | 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 Scholas tic Marks | Non Scholas tic Marks C6 | CIA Total | % of Assessm ent |
|----------------|-----------------------|-----------------------|----------------------------|-----------------------------|--------------------------|----------------------------|-----------------------------|------------|---------------------|
| | T1 10 Mk s. | T2 10 Mk s. | Qui z 5 Mk s. | Assignm ent 5 Mks | OBT/P PT 5 Mks | 35 Mks. | 5 Mks. | 40Mk s. | |
| 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 | 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 | P01 | P02 | P03 | P04 |
|---------|-----|-----|-----|-----|
| 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 |
|---|--|-----------------|----------------------------------|---------------|
| UNIT -1 INTRODUCTION TO BAKERY AND BAKERY TECHNIQUES | | | | |
| 1.1 | Introduction to Bakery | 2 | Chalk & Talk | Black Board |
| 1.2 | Baking Techniques – Bread, Cake, Biscuits & Cookies | 4 | Demonstration, Hands on Training | Lab |
| UNIT -2 FOOD PRESERVATION | | | | |
| 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 |
| UNIT -3 METHODS OF FOOD PRESERVATION | | | | |
| 3.1 | Methods of Food preservation | 2 | Chalk & Talk | Black Board |
| 3.2 | Preparation of Jam, Jelly, Squash, Tuttyfrutti, Marmalade, Vathal, Vadagam | 4 | Hands on Training | Lab |
| UNIT -4 FOOD ADULTERATION | | | | |
| 4.1 | Types of Adulterants | 2 | Chalk & Talk | Black Board |
| 4.2 | Methods of Adulteration | 2 | Lecture | LCD |

| | | | | |
|-------------------------------|--|---|----------------------------------|-------------|
| 4.3 | Procedure for identifying adulterants in foods | 2 | Demonstration, Hands on Training | Lab |
| UNIT -5 FOOD ADDITIVES | | | | |
| 5.1 | Additives – functions, uses, importance antioxidants, coloring matter, | 3 | Chalk & Talk | Black Board |
| 5.2 | emulsifying agent and stabilizers. | 3 | Lecture | LCD |

| Evels | C1 | C2 | C3 | C4 | C5 | Total Scholastic Marks | Non Scholastic Marks C6 | CIA Total |
|----------------|---------------|---------------|----------------|---------------------|------------------|------------------------|-------------------------|-----------|
| | 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 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 |
|------------|-----|-----|-----|-----|
| CO1 | 2 | 2 | 2 | 3 |
| CO2 | 2 | 2 | 2 | 3 |
| CO3 | 2 | 2 | 2 | 3 |
| CO4 | 2 | 2 | 2 | 3 |
| CO5 | 2 | 2 | 2 | 3 |

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

COURSE DESIGNER:

1. Mrs.J.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

| | | |
|-----------------|----------------------------|----------------|
| UNIT – I | INTRODUCTION TO PRA | [6 HRS] |
|-----------------|----------------------------|----------------|

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>=1>

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|--|-----------------|-------------------|---------------|
| UNIT 1 - INTRODUCTION TO PRA | | | | |
| 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 |
| UNIT -2 PRINCIPLES AND MENU OF METHODS | | | | |
| 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 |
| UNIT -3 MAPPING AND MODELLING | | | | |

| | | | | |
|------------------------------------|---|---|----------------|-------------|
| 3.1 | Self -study and mapping | 2 | Chalk and talk | Black board |
| 3.2 | Social and Resource Mapping | 4 | Lecture | LCD |
| UNIT -4 RANKING METHODS | | | | |
| 4.1 | Concept of health, wealth | 2 | Lecture | LCD |
| 4.2 | Pairwise and Matrix ranking | 4 | Chalk and talk | LCD |
| UNIT -5 PROJECT FORMULATION | | | | |
| 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 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 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

| CO | | Level |
|------------|--|--------------|
| CO1 | Understand the concepts of consumerism | K1 |
| CO2 | Understand the importance of types of consumerism and their rights | K2 |
| CO3 | Describe the importance of consumer Protection | K3 |
| CO4 | Build skills in Green Consumerism | K3 |
| CO5 | Infer the consumer movement | K4 |

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

♦

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

| | | |
|-----------------|---------------------------|-----------------|
| UNIT – I | MANAGEMENT PROCESS | [15 HRS] |
|-----------------|---------------------------|-----------------|

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.

| | | |
|------------------|------------------|-----------------|
| UNIT – II | RESOURCES | [15 HRS] |
|------------------|------------------|-----------------|

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.

| | | |
|-------------------|-------------------------|-----------------|
| UNIT – III | MONEY MANAGEMENT | [15 HRS] |
|-------------------|-------------------------|-----------------|

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.

| | | |
|------------------|---------------------------|-----------------|
| UNIT – IV | STANDARD OF LIVING | [15 HRS] |
|------------------|---------------------------|-----------------|

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.

| | | |
|-----------------|--------------------|-----------------|
| UNIT – V | CONSUMERISM | [15 HRS] |
|-----------------|--------------------|-----------------|

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/
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/

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|------------------------------------|--|-----------------|-------------------|-------------------|
| UNIT 1 – Management Process | | | | |
| 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 |

| | | | | |
|-----------------------------------|---|---|-----------------|----------------------|
| | | | | |
| UNIT -2 Resources | | | | |
| 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 |
| UNIT -3 Money Management | | | | |
| 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 |
| UNIT -4 Standard Of Living | | | | |
| 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 |
| UNIT -5 Consumerism | | | | |
| 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 |
|----------------|--|-----------------|-------------------|---------------|
| UNIT 1 | | | | |
| 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 |
| UNIT -2 | | | | |
| 2.1 | Types of Lightning - Direct, Indirect | 5 | Lecture | Black board |
| 2.2 | Diffused lightning. | 5 | Chalk & Talk | PPT |
| UNIT -3 | | | | |
| 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 |
| UNIT -4 | | | | |
| 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 |
| UNIT -5 | | | | |
| 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 |
|------------|-----|-----|-----|-----|
| CO1 | 3 | 3 | 1 | 1 |
| CO2 | 3 | 3 | 1 | 1 |
| CO3 | 3 | 3 | 1 | 1 |
| CO4 | 3 | 3 | 1 | 1 |
| CO5 | 3 | 3 | 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. 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 NUTRITIONFOR 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
8. www.cdc.gov/diabetes/pubs/factsheets/kidney.htm

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|--|-----------------|-------------------|-------------------|
| UNIT -1 NUTRITION FOR DEVELOPMENTAL MILESTONES | | | | |
| 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 |
| UNIT -2 DIET THERAPY | | | | |
| 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 |
| UNIT -3 THERAPEUTIC DIETS FOR HEART, KIDNEY & LIVER DISEASES | | | | |
| 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 |
| UNIT -4 DIET IN AIDS AND CANCER | | | | |

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 |
| UNIT -5 COMMUNITY NUTRITION | | | | |
| 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 |

| Levels | C1 | C2 | C3 | C4 | C5 | Total Scholastic Marks | Non Scholastic Marks C6 | CIA Total |
|--------|---------------|---------------|----------------|---------------------|------------------|------------------------|-------------------------|-----------|
| | 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 | 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 | |

| | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|--|
| C03 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| C04 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| C05 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

Mapping of C0s with POs

| CO/ PSO | P01 | P02 | P03 | P04 |
|------------|-----|-----|-----|-----|
| C01 | 3 | 3 | 1 | 2 |
| C02 | 3 | 3 | 1 | 1 |
| C03 | 3 | 3 | 2 | 1 |
| C04 | 3 | 3 | 2 | 1 |
| C05 | 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:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|-------------------|--|------------------------|-----------------------------|----------------------------------|
| UNIT -1 | | | | |
| 1.1 | Planning meals for families at low, medium and high income levels. | 5 | Preparation & Demonstration | Essential materials and utensils |
| UNIT -2 | | | | |
| 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 |
| UNIT -3 | | | | |
| 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 |
| UNIT -4 | | | | |
| 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.

PRACTICALS

- i. A study on family structure and family problems
- ii. Visit to family counseling center
- iii. Visit to Old Age Home.

REFERENCES

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*, (6th 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:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|---|---|------------------------|---------------------------------|------------------------|
| UNIT -1ADULthood AND MARRIAGE (15HRS.) | | | | |
| 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 anddiscussion | |
| UNIT -II FAMILY (18 HRS.) | | | | |
| 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 |
| UNIT -III FAMILY CRISIS (15 HRS.) | | | | |
| 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 |
| UNIT -IV WELFARE OF THE AGED AND CHILDREN WITH SPECIAL NEEDS (15 HRS.) | | | | |
| 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 |
| UNIT -V POPULATION EDUCATION AND FAMILY WELFARE (15HRS.) | | | | |
| 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 |

| Levels | C1 | C2 | C3 | C4 | C5 | Total Scholastic Marks | Non Scholastic Marks C6 | CIA Total |
|----------------|---------------|---------------|----------------|---------------------|------------------|------------------------|-------------------------|-----------|
| | 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

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 | |

| | | | | | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|---|---|--|
| CO2 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| CO3 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| CO4 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| CO5 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | |

Mapping of COs with POs

| CO/ PSO | P01 | P02 | P03 | P04 |
|----------------|------------|------------|------------|------------|
| CO1 | 1 | 1 | 1 | 1 |
| CO2 | 3 | 1 | 1 | 1 |
| CO3 | 3 | 1 | 1 | 1 |
| CO4 | 1 | 1 | 3 | 1 |
| CO5 | 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 mid 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 |
|--|---|------------------------|--------------------------|-----------------------|
| UNIT -1 HOLISTIC APPROACH TO FITNESS AND HEALTH | | | | |
| 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 |
| UNIT -2 ENERGY SYSTEMS | | | | |
| 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 |
| UNIT -3 CASE STUDIES AND DIET MODIFICATIONS | | | | |
| 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 |
| UNIT - 4 PHYSICAL FITNESS AND HEALTH INTER-RELATIONSHIPS | | | | |
| 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 |
| UNIT-5 ALTERNATIVE SYSTEMS OF HEAL WAND FITNESS | | | | |
| 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

| | |
|-----------------------|-----------|
| 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 | CIA | ESE | Total |
| 5 | 10 | 15 | 5 | 5 | 40 | 60 | 100 |

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:

| NO. | COURSE OUTCOMES | KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY) | PSOs ADDRESSED |
|------------|--|--|---------------------------|
| 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 |

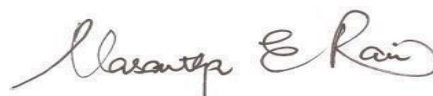
Mapping of COs with PSOs

| CO/ PSO | PS 01 | PS 02 | 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 | 1 | 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 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| CO/ PSO | PS 01 3 | PS 01 4 | 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 | 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/ 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
2. 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 |
|--|---|-----------------|---------------------------|------------------|
| UNIT -1 FOOD PROCESSING OPERATION | | | | |
| 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 |
| UNIT -2 PROCESSING BY HEAT AND COLD | | | | |
| 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 |
| UNIT -3 PROCESSING OF PLANT FOODS | | | | |
| 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 |
| UNIT -4 PROCESSING OF ANIMAL FOODS | | | | |
| 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 |

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

| | | | | |
|---------------------------------|-----------------------------|---|--------------------------|--------------|
| 4.5 | Poultry Processing | 3 | Lecture | PPT & Videos |
| UNIT -5 DAIRY PROCESSING | | | | |
| 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 |

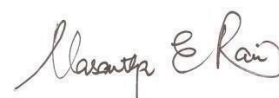
Mapping of COs with PSOs

| 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

| PROGRAM ME CODE | COURSE CODE | COURSE TITLE | CATEGO RY | 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

| | | |
|---|---|-----------------|
| UNIT – I | INTRODUCTION TO ENTREPRENEURSHIP | [15 HRS] |
| Entrepreneurship- Meaning, Importance, Concept of women Entrepreneurship, Characteristics of Entrepreneur, Function of women Entrepreneurship, Developing women Entrepreneur, Problems of women Entrepreneur. | | |
| UNIT – II | INPUTS TO START BUISNESS | [15 HRS] |
| 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. | | |
| UNIT – III | FINANCIAL INSTITUTION | [15 HRS] |
| 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. | | |
| UNIT – IV | REPORT PREPARATION | [15 HRS] |

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.

| | | |
|-----------------|--|-----------------|
| UNIT – V | RECENT TRENDS IN ENTREPRENEURSHIP | [15 HRS] |
|-----------------|--|-----------------|

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

COURSE CONTENTS & LECTURE SCHEDULE:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|--|-------|-----------------|-------------------|---------------|
| UNIT 1 INTRODUCTION TO ENTREPRENEURSHIP | | | | |

| | | | | |
|--|---|---|----------------|-------------------|
| 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 |
| UNIT - 2 TECHNIQUES TO START BUISNESS | | | | |
| 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 |
| UNIT -3 FINANCIAL INSTITUTION | | | | |
| 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 |
| UNIT -4REPORT PREPARATION | | | | |
| 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 |
| UNIT -5 RECENT TRENDS IN ENTREPRENEURSHIP | | | | |
| 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 agripreneurship | 4 | Lecture | PPT & White board |
| 5.5 | Challenges involved in developing agripreneurship | 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. Caroll, 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:

| Module No. | Topic | No. of Lectures | Teaching Pedagogy | Teaching Aids |
|--|---|------------------------|---------------------------|----------------------|
| UNIT -1 DIET COUNSELLING | | | | |
| 1.1 | Diet Counseling – Definition, Counseling process and its significance. | 6 | Chalk & Talk | Black Board |
| UNIT -2 ASSESSMENT | | | | |
| 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 |
| UNIT -3 CASE STUDIES AND DIET MODIFICATIONS | | | | |
| 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 |
| UNIT -4 COUNSELLING CENTER | | | | |
| 4.1 | Counselling Center - Prerequisites and preparation for setting up a counselling center. | 6 | Chalk & Talk | Black Board |
| UNIT -5 COUNSELLING CAMPS | | | | |
| 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 |

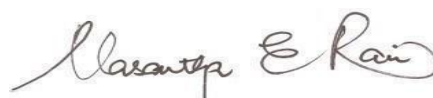
Mapping of COs with PSOs

| 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 | 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 COs with POs

| CO/ PSO | P01 | P02 | P03 | P04 |
|---------|-----|-----|-----|-----|
| 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

| | | |
|---|--------------------------------|-----------------|
| UNIT – I | HOUSE PLAN | [10 HRS] |
| Floor plan- low-income plan-medium income plan-high income plan-double storied plan. | | |
| UNIT – II | INTERIOR DESIGNING | [5 HRS] |
| Clearance spaces- Living room-dining room-Living cum Dining room- bed room –Kitchen lay out-bath room | | |
| UNIT – III | FLOOR COVERINGS | [5 HRS] |
| Definition- Selection, Types of floor coverings | | |
| UNIT – IV | WINDOW TREATMENTS | [5 HRS] |
| Concept- Types of Windows – Types of Window Treatments | | |
| UNIT – V | VASTU IN HOUSE PLANNING | [5 HRS] |
| 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. Drievex 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, Tenessee,

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 |
|-----------------------------------|----------------------------------|-----------------|-------------------|-------------------|
| UNIT 1 – HOUSE PLAN | | | | |
| 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 |
| UNIT -2 Interior Designing | | | | |
| 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 |
| UNIT -3 Floor coverings | | | | |
| 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 |
| UNIT -4 Window Treatments | | | | |
| 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 |
| UNIT -5 Vastu in Interiors | | | | |
| 5.1 | Self -study -Floor plan | 1 | Lecture | LCD |
| 5.2 | Basics of Vastu | 1 | Discussion | Black board |
| 5.3 | Feng Shui Application | 3 | Lecture | PPT & White board |
| 5.4 | Feng Shui Accessories | 1 | Discussion | PPT & White board |

| Levels | C1 | C2 | C3 | C4 | C5 | Total Scholastic Marks | Non Scholastic Marks | CIA Total |
|--------|----|----|----|----|----|------------------------|----------------------|-----------|
|--------|----|----|----|----|----|------------------------|----------------------|-----------|

| | | | | | | | 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 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 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 | 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 | 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 | |

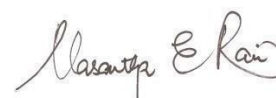
Mapping of COs with POs

| 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**

warded By



(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, BanarsidarBhanot Publishers2007
2. Goel S L, "Hospital Administration and Management: TheoryandPractice",Deep& DeepPublications, NewDelhi(2007).
3. Goyal RC, "Hospital Administration and Human Resource Management", Prentice Hall oIndia, 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/>

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| CIA |
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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 | | | |
|-----------|---|--------------|--|-----|---|--------|--|
| C1 | - | Test (CIA 1) | | 1 | - | 10 Mks | |
| C2 | - | Test (CIA 2) | | 1 | - | 10 Mks | |
| C3 | - | Assignment | | 1 | - | 5 Mks | |

| | | | | | |
|-----------|---|--------------------|-----|---|-------|
| C4 | - | Open Book Test/PPT | 2 * | - | 5 Mks |
| C5 | - | Quiz | 2 * | - | 5 Mks |
| C6 | - | 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 Management | K1 | PSO1& PSO2 |
| 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