

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

Minutes of the Board of Studies - Upgradation of Syllabus of The Research Centre of Home Science

To be implemented from the academic year 2022-2023.
Venue: Textiles & Clothing lab.

Convened on 14.03.2022.

Convened at 2pm.

Members Present

1. DR. VASANTHA ESTHER RANI.

HEAD OF THE DEPT.
Hassantp Elcin

2. DR. G. SRIDEVI,

ASST. PROF, DEPT. OF PLANT,
BIOTECHNOLOGY, SCHOOL OF BIOTECH,
MADURAI KAMARAJ UNIVERSITY,
MADURAI-621 001.

UNIVERSITY NOMINEE
(ABSENT).

3. DR. P. C. JEMINA RANI,
ASST. PROF, DEPT OF COSTUME
DESIGN & FASHION,
CHIKKANA GROUT. ARTS COLLEGE,
TIRUPUR - 2.

SUBJECT EXPERT.
P.C. Jemina
14.3.22

4. DR. SRIDEVI SIVAKAMI. PL,
ASSOCIATE PROFESSOR,
DEPT OF FOOD SERVICE MANAGEMENT
& DIETETICS,
AVINASHILINGAM UNIVERSITY,
COIMBATORE.

SUBJECT EXPERT.
Pl. Sridevi
14/3/2022.

5. DR. SURESH GOVINDAN,
RESEARCH HEAD, AVN AYURVEDIC
FORMULATIONS PVT. LTD.

INDUSTRIALIST
Suresh Govindan
14/3/22

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|-----|---|--|
| 6. | MS. K. SUSHEELA,
AVP. CORPORATE PARTNERSHIPS,
CALLIDUS SOCIAL ENTREPRISES,
BANGALORE | ALUMNAE.
K. Suseela
14.03.22 |
| 7. | DR. N. MALATHI,
ASST. PROFESSOR,
DEPT. OF ZOOLOGY | <i>Malathi</i> 14/3/22
DEAN OF ACADEMIC AFFAIRS |
| 8. | DR. S. SANTHI,
ASSOCIATE PROFESSOR. | STAFF MEMBER.
<i>SS</i> |
| 9. | DR. K. KARTHIGA,
ASST. PROFESSOR | STAFF MEMBER
<i>k.karthiga</i> |
| 10. | MRS. P. MAGDALENE VIRJINI,
ASST. PROFESSOR | STAFF MEMBER.
(ABSENT) |
| 11. | MS. C. HELEN,
ASST. PROFESSOR | STAFF MEMBER.
<i>CH</i> |
| 12. | MS. D. MOUNA
ASST. PROFESSOR | STAFF MEMBER
<i>D.M</i> |
| 13. | DR. C. PRIYALATHA
ASST. PROFESSOR | STAFF MEMBER.
<i>C.priyalatha</i> |
| 14. | MS. J. JOSEPHINE JESINTHA
ASST. PROFESSOR | STAFF MEMBER
<i>J. Josephine Jesintha</i> |
| 15. | MS. T. ASHMA
ASST. PROFESSOR | STAFF MEMBER
<i>AH</i> |

16. MS. A. MABEL ESTHER PAIPURNA
A. Ma

FGDC - STAFF MEMBER.

17. MS. BHAVANI

A. Mabel Esther Paipurna.

FGDC - STAFF MEMBER.

R. Bhavani.

ACTION TAKEN REPORT

S.N. COMMON SUGGESTIONS OFFERED IN
THE PREVIOUS BOARD

ACTION TAKEN FOR THE
ACADEMIC YEAR 2021-2022

1. The proposed self learning courses both discipline specific and interdisciplinary courses was appreciated by the external experts of the Board.

Basis of Psychology for IUG students has been introduced in the II Semester.

2. The Board felt that the introduction of skill embedded course on Montessori Training was the need of the hour.

Skill embedded course has been introduced and students from all major have enrolled.

3. Online dietetic / industrial internship was suggested.

The students have attended on-line Holistic Nutrition internship.

CHANGE OF COURSE TITLE
NA

CHANGE OF COURSE CODE

19N6ME4 - Nutrition for Health & Fitness

19N6ME5 - Food and Dairy Processing

19N6ME6 - Women and Entrepreneurship Development.

NEW COURSES INTRODUCED.

S.No.	COURSE CODE	COURSE TITLE	RELEVANCE TO				SCOPE FOR			NEED FOR
			L	R	N	G	ENTR	EMP.	SD	
1.	22UGVACN1	CRASH COURSE APPAREL MAKING				G			SD	GAINING EXPERTISE IN APPAREL MAKING WILL FETCH THEM INNUNERABLE JOB OPPORTUNITIES
2.	22UGVACN2	CERTIFICATE COURSE - SURFACE ORNAMENTATION & APPAREL MAKING				G			SD	PAVES WAY FOR SELF EMPLOYMENT

REVISED COURSES.

S. NO	COURSE CODE	COURSE TITLE	NO & TITLE OF UNITS REVISED	%	NEED FOR REVISION	RELEVANCE				SCOPE
						L	R	N	I	
1.	N5CC1	CRECHE & PRESCHOOL MANAGEMENT	CHILD PSYCHOLOGY INCLUDED CONCEPTS OF SPECIAL CHILDREN INCLUDED.	20%	SCOPE FOR CHILD COUNSELING				N	
2.	19N5CC14	LAB IN PRESCHOOL ADMINISTRATION	SUPPLEMENTARY FOODS PLANNED.	10%	JOB IN PRESCHOOL ADMINISTRATION				N	
3.	N5CC15	FAMILY RESOURCE MANAGEMENT	FRM - CHANGED TO HOUSING ART IN HOME.	5%	APT. TITLE				N	
4.	N5ME1	TECHNICAL TEXTILES	TRANSPORTATION TEXTILES WAS USED IN PLACE OF MORILE &	5%	BETTER TERM / NOVEL				N	EMP.

S No.	COURSE CODE	COURSE TITLE	No. & TITLE OF REVISED COURSE	%	NEED FOR REVISION	RELEVANCE				Score		
						L	R	N	G	Exp	Ent	SD
5.	N5ME2	FOOD BIOTECHNOLOGY	COMBINATION OF UNIT IV & V TO INCLUDE GM FOODS	10%	RECENT TRENDS ON GM FOODS INCLUDED				G	Exp		
6.	N5SB3	BAKING, FOOD PRESERVATION & ADULTERATION	Instead of Baking, Title changed to Bakery. Types, methods & identification of adulterants included in Unit III. In Unit IV Marmalade, Vatala & Kadagam included.	40%	MORE APPROPRIATE			N		Exp	Ent	SD
7.	N5SB4	PARTICIPATORY RURAL APPRAISAL	In Unit II instead of Menu of methods, Types of menu has been included. In Unit V, reports & documents included.	20%	Syllabus would be complete if reports & documents are added.			N				SD.

8.	19NSCC15	HOUSING	TITLE OF FRM - I ART IN CHANGED HOUSING HOME ART IN HOME	57%.	MORE APPROPRIATE	N	
9.	N6CC15	FAMILY RESOURCE MANAGEMENT	TITLE CHANGED TO RESOURCE MANAGEMENT IN UNIT V - GREEN CONSUMERISM INCLUDED. IN UNIT II - LIGHTING NATURAL LIGHTING INCLUDED.	10%.	RECENT TOPIC.	N	
10.	N6CC17	CLINICAL NUTRITION & DIETETICS	ALLERGY & BURNS INCLUDED IN UNIT IV	5%.	NEED FOR DIETARY MODIFICATIONS.	G	EMP
11.	19N6ME3	FAMILY DYNAMICS	CASE STUDY INCLUDED	10%.	PRACTICAL KNOWLEDGE	G	SD
12.	19N6ME4	FOOD & DAIRY PROCESSING	RECENT TRENDS IN PACKAGING INCLUDED IN UNIT I	5%.	RECENT TREND	N	ENTRE
13.	19N6ME5	WOMEN & ENTREPRENEURSHIP DEVT.	UNIT III - MSME UNIT II - IMPVTS TO START BUSINESS.	5%.	CURRENT TOPIC.	N	ENTRE
14.	19N6ME6	NUTRITION IN HEALTH & FITNESS	UNIT II - DIET MANIPULATION - CHANGED TO DIET MODIFICATION UNIT II - NUTROLOGY TO BE INCLUDED.		MORE APPROPRIATE	G	EMP.
16.	19N6SB5	NUTRITION COUNSELING DIETITICIAN, CLASSIFICATION & RESPONSIBILITIES.	UNIT I - ROLE OF DIETITICIAN, CLASSIFICATION & RESPONSIBILITIES.	10%.			

		CODE OF ETHICS RD, MEMBERSHIP INIDA, NSI	FACILITATES BETTER UNDERSTAND ING	N	EMP'S SD
16.	19N6SB6	SB - INTER DESIGN 5' BY VASTU IN DECORATION HOUSE RANNING	VASTU REPLACED 5% FOR BETTER UNDERSTAND ING.	N	SD

17.	19N4SB2	CAD "IN UNIT II , INTRODUCING IS CHANGED TO 20% INTRODUCTION OF ELEMENTS OF DESIGN - "IN UNIT V , DRAPING IS EXPANDED AS DRAPING WITH SLEEVES ,YOK COLLAR & POCKETS	FACILITATES QUESTION SETTING	N	SD
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UPDATION OF OPEN EDUCATIONAL RESOURCES .
NA

REVISION OF COURSES

1.	19NICC2	PHYSIOLOGY IN UNIT V, MUSCULOSKELEAL SYSTEM WAS INCLUDED.	THE SUBJECT PHYSIOLOGY WOULD BE INCOMPLETE WITHOUT SKELETAL SYSTEM.	G	EMP.
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2.	19N2CC5	FOOD SCIENCE	IN UNIT IV, FACTORS AFFECTING COAGULATION, TESTING FRESHNESS IN EGG, FERMENTED & NON-FERMENTED PRODUCTS. IN UNIT 1 - DESIGNING FOODS INCLUDED.	10%	KNOWLEDGE OF COAGULATION TESTING THE FRESHNESS OF EGG & FERMENTED NON-FERMENTED PRODUCTS IS ESSENTIAL.	G	EMP. & SD
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3	19N3CC7	EXTENSION EDUCATION & COMMUNICATION	NATIONAL WELFARE PROGRAMS FOR WOMEN IS INCLUDED.	10%	ESSENTIAL INFORMATION	N	EMP.
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4.	19N4AC4	FOOD PRODUCTION & SERVICE LAB	IN UNIT I, II, III & IV, INDIAN, CONTINENTAL & ORIENTAL CUISINE IS INCLUDED. COURSE MENU - SPECIFIED AS 3, 5 & 7 COURSE & BANQUET.	10%	IN DEPTH KNOWLEDGE ON DIFFERENT TYPES OF CUISINE.	G	EMP.
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5.	19N5CC13	CRECHE & PRESCHOOL MANAGEMENT.	IN UNIT II - ROR OF CARE TAKEN PLANNING ACTIVITIES FOR CHILDREN - BEING GENERAL WAS CHANGED TO SPECIFIC AGE GROUP. AS PER NATIONAL LEVEL.	5%	CHILDREN IN GENERAL WAS MADE... SPECIFIC.	G	EMP.
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IN UNIT IV,
PRESCHOOL PROGRAM
TYPES OF PLAY
IS ADDED.

5%. To study
PLAY WITH
DEEPER SENSE

N

ENTR
&
EMP

6. 19N55B3 ENTREPRENEURIAL SKILLS
BAKING,
FOOD PRESERVATION
& ADULTERATION

IN UNIT I -
INTRODUCTION TO
BAKERY & BAKERY
TECHNIQUES -
ROLE OF INGREDIENTS
IN BAKING INCLUDED

KNOWLEDGE
5%. ON THE
ROLE OF
INGREDIENTS
IS ESSENTIAL

SD

IN UNIT III -
METHODS OF PRESERVATION
TOMATO KETCHUP
IS INCLUDED

5%. SKILL IN
PREPARING
KETCH CAN
BE PROFITABLE

N

SD

7. 19N6CC19 CLINICAL
NUTRITION
& DIETETICS

IN UNIT II -
DIET THERAPY
TYPES/ GRADES
OF OBESITY ARE
INCLUDED

10%. KNOWLEDGE
ON OBESITY

IN DIABETES MELLITUS
TYPES OF DM,
DIAGNOSIS IS
INCLUDED

& DIABETES
REQUIRED
TO BECOME
IDEAL
DIETETICIAN

G

EMP

UNIT I - FEEDING PRACTICES
FOR SPECIAL CHILDREN

8. 19N6SB5 ENTREPRENEURIAL SKILLS
NUTRITION
COUNSELING

IN UNIT IV -
COUNSELING
CENTRE -
TEACHING AIDS
USED BY DIETITIAN
INCLUDED

10%. SKILL IN
PREPARING
TEACHING
AIDS OF
UTMOST
IMPORTANCE

N

SD

NEW COURSES INTRODUCED.

S.No.	COURSE NO.	COURSE TITLE	RELEVANCE TO	SCOPE	NEED FOR INTRODUCTION
1.	21SC2SL N2	BASICS OF PSYCHOLOGY.	G.	EMP	IT IS THE NEED OF THE HOUR. MANY COGNITIVE ISSUES ARE LINKED WITH PSYCHOLOGY.
2.	21Z3SLNB	PUBLIC HEALTH & HYGIENE.	N.	EMP.	HELPS STUDENTS TO SEEK JOBS AS HEALTH INSPECTOR & SANITATION OFFICER.

INTRODUCTION OF SKILL EMBEDDED CERTIFICATE / DIPLOMA / ADVANCED DIPLOMA VALUE ADDED COURSES.

1.	22UGVAC N1	APPAREL MAKING CRASH COURSE	G	SD	GAINING EXPERTISE IN APPAREL MAKING WILL FETCH JOBS.
2.	22UGVAC N2	SURFACE ORNAMENTATION & APPAREL MAKING	G.	SD.	PAVES WAY FOR SELF EMPLOYMENT.

RUBRICS FOR INTERNSHIPS / PROJECT NA

- Online Dietetic internship was suggested.
- Internship for the core subject Housing and art in home was suggested.

MINUTES OF THE BOARD OF STUDIES - UPGRADATION OF SYLLABUS FOR M.Sc. HUMAN NUTRITION & NUTRACEUTICALS

VENUE : TEXTILES & CLOTHING LAB.

CONVENED ON: 14-03-2022.

CONVENED AT : 2 pm.

ACTION TAKEN REPORT

S.No.	COMMON SUGGESTIONS OFFERED IN THE PREVIOUS BOARD	ACTION TAKEN FOR THE ACADEMIC YEAR 2021-2022
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1. The Board members appreciated the framework of syllabi for PG courses

2. The choice between dietetic internships and industrial (food) industry internship was appreciated by the Board.

The students are given academic flexibility in choosing their area of interest

NEW COURSES INTRODUCED.

S.No.	COURSE CODE	COURSE TITLE	RELEVANCE	SCORE	NEED FOR INTRODUCTION
1.	21PG2NS1	GERIATRIC SCIENCES	G	ENTR	KNOWLEDGE OF DIETIC CONSELIN FOR THE ELDERLY IS THE NEED OF THE HOUR

REVISED COURSES.

1.	19PG1N3	APPLIED PHYSIOLOGY	MODIFICATIONS IN REPRODUCTIVE SYSTEM CARRIED OUT	EMP.	INCLUSION OF SUBHEADINGS
2.	19PG2N10	FFN LAB	G	EMP.	IDENTIFYING THE PRESENCE OF BIOACTIVE COMPONENTS THROUGH QUANTITATIVE ANALYSIS

REVISION OF COURSES.

S.No.	COURSE CODE	COURSE TITLE	UNITS	REVISED	% REVISION	NEED FOR REVISION	RELEVANCE	Score
1.	[REDACTED]	[REDACTED] NUTRITION	[REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED]	1	FACILITATES STUDENTS TO LEARN BETTER 3 MAKES QUESTION PAPER SETTING MORE SPECIFIC	G	Emp
2.	[REDACTED]	A [REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED]	1	IN DEPTH KNOWLEDGE ABOUT MALE 1 FEMALE REPRODUCTIVE SYSTEM	G	Emp.
3.	[REDACTED]	F [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED]	1	RECENT TREND IN FEMALE REPRODUCTIVE HEALTH.	G	Emp.
4.	[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED]	1	THE UNITS - II & I were MADE MORE SPECIFIC		

3

PG STUDENTS.

EMR

4. SUBJECT EXPERT.

f. chue

5. INDUSTRIALIST

h. v.

6. ALUMNAE.

K. Suresh

7. DEAN OF ACADEMIC AFFAIRS.

Malathi 14/3/22

8. STAFF MEMBERS.

1) Abanthy E. Ravi

2) SS

3) K. Karthiga

4) CA

5) D. Mani

6) C. Prayalath

7) J. Josephine Jesuina

8) Achy

9) A. Mabel Esther Paipurna

10) P. Bhavani

14/3/22

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.

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

(For those who joined in 2019 onwards)

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UG-UAHS	19N1CC 2	Physiolog y	Lecture	4	3

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 [12 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; Jaundice.

EXCRETORY SYSTEM

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

UNIT-II BLOOD AND CIRCULATORY SYSTEM [12 HRS]

Composition, functions and volume, Erythrocytes, Leucocytes, Thrombocyte 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 [12 HRS]

Anatomy, respiratory pathway-lungs, lung unit, Mechanism of respiration, lung volumes, Gaseous exchange in tissues, lungs, transport of O₂ and CO₂ chloride shift; Regulation of respiration - nervous, chemical HerringBrewers reflex; types of breathing; modified forms of respiration Hypoxia, Asphyxia, Cyanosis, Oxygen debt; Artificial Respiration.

UNIT-IV REPRODUCTIVE AND ENDOCRINE SYSTEM [12 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 AND NERVOUS SYSTEM [12 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.

Self-Study: Physiology of sleep. 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) *Textbook 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).*FunctionoftheHumanbody*,4thEdition,W.B.Sanders Company, Philadelphia.
3. GuytonA.C,andHall,J.B.(2010).*TextBookofMedicalPhysiology*,9thEdition, 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*, 4thEdition, Jaypee Brothers Medical Publishers Ltd, NewDelhi .
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

Open Educational Resources:

1. <https://libguides.wccnet.edu/oer-subjects/anatomy-physiologyvphysiology.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, PP T

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,	3	Lecture	Black Board

	Erythroblastosis foetalis.			
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 cord	1	Lecture	Charts
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		
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/PP T 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	K1, K2	

	circulatory system.		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

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
CO 1	3	2	1	1	1	1	1	1	1	1	1	1
CO 2	2	3	1	1	1	1	1	1	1	1	1	1
CO 3	3	2	1	1	1	1	1	1	1	1	1	1
CO 4	2	2	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 / PSO	PSO 13	PSO 14	PSO 15	PSO 16	PSO 17	PSO 18	PSO 19	PSO 20	PSO 21	PSO 22	PSO 23	
CO	1	1	1	1	2	1	1	1	1	1	1	

1												
CO 2	1	1	1	1	1	1	1	1	1	1	1	
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	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:

- Staff Name: Dr. Vasantha Esther Rani**
- 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)



PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UG-UAHS	19N1CC 2	Physiolog y	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.

Anatomy of respiratory pathway, lung unit, Mechanism of respiration, lung volumes, Gaseous exchange in tissues, lungs, transport of O_2 and CO_2 chloride shift; Regulation of respiration - nervous, chemical, Herring Brewers reflex; types of breathing; modified forms of respiration Hypoxia, Asphyxia, Cyanosis, Oxygen debt; Artificial Respiration.

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

UNIT-V MUSCULOSKELETAL [10 HRS]	SENSE ORGANS, NERVOUS SYSTEM and SYSTEM	10%
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Structure and functions of neuron, brain and spinal cord; Autonomic nervous system, Reflex Action.

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

TEXT BOOKS

- ## REFERENCE BOOKS

1. C.C. Chatterjee's .(2016) *Human Physiology*, 11e, Vol.1,CBS Publishers
2. Guyton,A.C, (2009).*FunctionoftheHumanbody*,4thEdition,W.B.SandersCompany, Philadephia.

3. Guyton, A.C. and Hall, J.B. (2010). *Text Book of Medical Physiology*, 9th Edition, W.B. Saunders 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*, Jaypee Brothers, Medical Publishers (p) Ltd, New Delhi.

Open Educational Resources:

1. <https://libguides.wccnet.edu/oer-subjects/anatomy-physiology/vphysiology.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,PP T
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;	1	Discussion	Black

	Haemoglobin, Erythrocyte sedimentation rate,			Board
2.4	Leucopoiesis, haemolysis,leucocyt osis, 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 cord	1	Lecture	Charts
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/PP T			
	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

[illegible]

Mapping of COs with POs

CO/ PSO	PO1	PO2	PO3	PO4
C01	3	3	1	1
C02	3	2	1	1
C03	1	1	1	1
C04	1	3	1	3
C05	2	2	1	3

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

COURSE DESIGNER:

Staff Name:Dr.Vasantha Esther Rani

Staff Name: Ms. Magdalene Virjini

Forwarded By



(Dr.Vasantha Esther Rani)

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

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UG-UAHS	19N2CC 5	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; functions and 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.

Self- Study: Solar cooking and microwave cooking

UNIT –II CEREALS, PULSES, FRUITS & VEGETABLES **(12 HRS.)**

Structure, Nutritive value, changes during preparation

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

UNIT –III MEAT, POULTRY &FISH **(12 HRS.)**

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

UNIT –IV EGG, MILK & MILK PRODUCTS

(12 HRS.)

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

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

(12 HRS.)

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

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.cftri.res.in>

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

<http://www.afsti.org>

<http://www.icfost.org>

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
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 moist heat methods and dry heat methods	4	Lecture	PPT
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
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	2	Lecture	Smart Board

	pulses			
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 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 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
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**

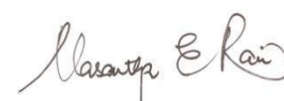
♦ Moderately Correlated – **2**

♦ 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

10%

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UG-UAHS	19N2CC 5	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; functions and 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.

Self- Study: Solar cooking and microwave cooking

UNIT –II CEREALS, PULSES, FRUITS & VEGETABLES **(12 HRS.)**

Structure, Nutritive value, changes during preparation

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

UNIT –III MEAT, POULTRY &FISH

(12 HRS.)

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

10%

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 milk products – fermented and non-fermented products.

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

(12 HRS.)

- c) Spices and condiments – use and abuses
 - d) Nuts and oilseeds –their nutritive value and importance of the diet;
- C) Self -study: Beverages– Classification and its role in daily diet.**

REFERENCES:

TEXTBOOK:

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

REFERENCE BOOKS:

7. Avantina Sharma (2010). *Food Science and Technology*, International Book Distributing Company.
8. Benion Marion (1980). *Introductory foods*, Macmillan, New York.
9. Fox B.A., Cameron A.G.(1982) *Food Science a Chemical Approach*Hodden and Stoughton Ltd., Great Britain.
10. Peckham G.C (1978) . *Foundations of Food preparation* Macmillan Co, New York.
11. Potter N.N.(2007) *Food Science*, The AVI Publishing Company INC, USA
12. ShankuntalaO.Manay (2005). *Food: Facts and Principles*, New age International Pvt.Ltd, NewDelhi.

OPEN EDUCATIONAL RESOURCES:

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

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

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

<http://www.afsti.org>

<http://www.icfost.org>

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
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 moist heat methods and dry heat methods	4	Lecture	PPT
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
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	2	Lecture	Smart Board

	pulses			
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 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 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
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)

II B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY
SEMESTER –III

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UAHS	19N3CC 7	EXTENSION EDUCATION AND COMMUNICATIO N	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	[20 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		
UNIT – III	COMMUNICATION	[15 HRS]
Self-study-Communication Definition, Meaning, Objectives & Principles Elements of communication, barriers to communication		

UNIT – IV	EXTENSION TEACHING METHODS	[20 HRS]
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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	[20 HRS]
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Definition, Classification, criteria for selection and evaluation of audiovisual aids & Cone of Experience.

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

Visual Aids:

- 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](https://en.wikipedia.org/wiki/Welfare_schemes_for_women_in_India)
<https://wcd.nic.in/sites/default/files/24-05010215wcdmedia.pdf>
[https://en.wikipedia.org/wiki/Panchayati raj in India](https://en.wikipedia.org/wiki/Panchayati_raj_in_India)

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
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	3	Discussion	PPT

	Rural livelihood mission			
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,	5	Chalk & Talk	LCD

	Pamphlet, Folder and mass meetings.			
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
5.6	Audio visual aids: Television, Motion pictures, Drama, Puppet show	5	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

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
CO 2	Describe the various welfare-programmes for women	K2, K3	PSO22

Mapping of COs with POs

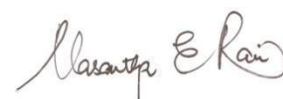
CO/ PSO	PO1	PO2	PO3	PO4
C01	3	1	1	1
C02	1	1	1	1
C03	1	1	1	1
C04	1	1	1	3
C05	1	1	1	3

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

♦ Weakly Correlated -**1**

COURSE DESIGNER:
Dr. C. Priyalatha

Forwarded By



(Dr.Vasantha Esther Rani)

II B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY

SEMESTER –III

10%

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	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	[20 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, Social welfare schemes, SHG, IRDP.		
UNIT – III	COMMUNICATION	[15 HRS]
Self-study-Communication Definition, Meaning, Objectives & Principles Elements of communication, barriers to communication		

10%

UNIT – IV	EXTENSION TEACHING METHODS	[20 HRS]
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Meaning and teaching, Classification of extension teaching methods

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

UNIT – V	AUDIO-VISUAL AIDS	[20 HRS]
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Definition, Classification, criteria for selection and evaluation of audiovisual aids & Cone of Experience.

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

Visual Aids:

- iii. Projected: Slides, filmstrip, opaque projection, overhead projection.
- iv. 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:

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

REFERENCE BOOKS:

3. Dhaina & Batnagar O.P.(1980) *Education and communication for Development*, Oxford Pub., New Delhi.
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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://liddfoundations.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> https://en.wikipedia.org/wiki/Panchayati_raj_in_India

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	5	Lecture	PPT & White board

	demonstration, group meetings, study tour.			
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
5.6	Audio visual aids: Television, Motion pictures, Drama, Puppet show	5	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

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

Mapping of COs with POs

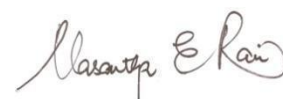
CO/ PSO	PO1	PO2	PO3	PO4
C01	3	1	1	1
C02	1	1	1	1
C03	1	1	1	1
C04	1	1	1	3
C05	1	1	1	3

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

♦ Weakly Correlated -**1**

COURSE DESIGNER:
Dr. C. Priyalatha

Forwarded By



(Dr.Vasantha Esther Rani)

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

For those who joined in 2019 onwards

PROGRA MME CODE	COURSE CODE	COURSE TITLE	CATEGO RY	HRS/WE EK	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.)

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	
1.2	Preparation of Salads	2	Hands on Training	LCD & White board
1.3	Preparation of Desserts	2	Hands on Training	
UNIT –II Main dish (Indian, Continental and Chinese)				
2.1	Topic2 Main dish (Indian)	2	Hands on Training	
2.2	Subtopics Main dish (Continental)	2	Hands on Training	
2.3	Main dish (Chinese)	2	Hands on Training	
UNIT –III Side dish (Indian, Continental and Chinese)				
3.1	Topic 3 Side dish (Indian)	2	Hands on Training	
3.2	Subtopics Side dish (Continental)	2	Hands on Training	
3.3	Side dish (Chinese)	2	Hands on Training	
UNIT –IV Course menu				

4.1	Topic 4 Preparation of course Menu -Indian	2	Lecture& Hands on Training	
4..2	Subtopics Preparation of course Menu -Continental	2	Lecture &Hands on Training	
4.3	Preparation of course Menu -Chinese	2	Lecture &Hands on Training	
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

C02	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 COs with POs

CO/ PSO	PO1	PO2	PO3	PO4
C01	1	3	1	1
C02	1	3	1	1
C03	1	3	1	1
C04	1	3	1	1
C05	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

10%

PROGRA MME CODE	COURSE CODE	COURSE TITLE	CATEGO RY	HRS/WE K	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
(Indian, Continental and Oriental Cuisine) [6 HRS.]

10%

UNIT –II Main dish (Indian, Continental and Oriental Cuisine) [6HRS.]

UNIT –III Side dish (Indian, Continental and Oriental Cuisine) (6 HRS.)

UNIT –IV Course menu (Three Course, Five Course, Seven Course, Banquet)
(6 HRS.)

FOOD SERVICE

UNIT -V Types of service, Cover laying, Table setting and Napkin folding(6 HRS.)

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	
1.2	Preparation of Salads	2	Hands on Training	LCD &White board
1.3	Preparation of Desserts	2	Hands on Training	
UNIT –II Main dish (Indian, Continental and Chinese)				
2.1	Topic2 Main dish (Indian)	2	Hands on Training	
2.2	Subtopics Main dish (Continental)	2	Hands on Training	
2.3	Main dish (Chinese)	2	Hands on Training	
UNIT –III Side dish (Indian, Continental and Chinese)				
3.1	Topic 3 Side dish (Indian)	2	Hands on Training	
3.2	Subtopics	2	Hands on	

	Side dish (Continental)		Training	
3.3	Side dish (Chinese)	2	Hands on Training	
UNIT -IV Course menu				
4.1	Topic 4 Preparation of course Menu -Indian	2	Lecture & Hands on Training	
4..2	Subtopics Preparation of course Menu -Continental	2	Lecture & Hands on Training	
4.3	Preparation of course Menu -Chinese	2	Lecture & Hands on Training	
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
	COURSE OUTCOMES (CO)		
CO 1	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	PO1	PO2	PO3	PO4
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)

III B.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	3	Chalk & Talk	Black Board and PPT

	Care of an infant – sleep, feeding, and hygienic aspects			
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	6	Lecture	PPT

	Music, Story, Creative activity, Games, Science Experience			
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
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	T2 10 Mks.	Quiz 5 Mks.	Assignment 5 Mks	OBT/PPT 5 Mks	35 Mks.	5 Mks.	40Mks.

	10 Mks.							
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)	PSOs ADDRESSED
-----	-----------------	---	----------------

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		1	1	1	1	1	1	1	
CO 4	1	1	3	3	1	1	1	1		1	1	
CO 5	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	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)

III B.Sc. HOMESCIENCE WITH FOOD BIOTECHNOLOGY

SEMESTER –V

For those who joined in 2019 onwards

10%

PROGRA MME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/ WEEK	CREDITS
UAHS	19N5CC13	Crèche 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, Bronfenbrenner's Ecological Theory. Early Childhood Care and Development. Importance, Role in holistic Development. Psychological Care of the children -conditions contributing to the mental wellbeing of children– Role of Family Relationship in Psychological Care of the Children -Parents, Grandma, Siblings, Peer group influences in the development of a child

Self-Study: 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 -

0-6 months

5%

7-12 months

13-24 months

25-36 months,

Care of an infant – sleep, feeding, and hygienic aspects.

Special requirements – furniture, rooms, play equipment's and utensils
Prevention of accidents in children.

UNIT –III PRESCHOOL EDUCATION

(18 HRS.)

Preschool – Meaning and Objectives.

Significance of Preschool Education,

Functions of preschool Education

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.

Play-Definition of Play, Importance and types of Play

(a) Free and Structured Play

(b) Individual and Group Play

(c) Vigorous and Quiet Play:

(d) Outdoor and Indoor Play

5%

Selection and maintenance of Play equipment for Preschool children

UNIT –V ORGANISATION OF A PRESCHOOL CENTRE

(20HRS.)

Physical setup- Essentials of building, Building Plan

Preschool Staff and Personnel- Qualities and Role

Records and Reports –Types of records, Significance of Record Keeping

Self –Study : Home school Relationship –Importance of home school relationship,

Types of home school relationship.

REFERENCES:

1. Chowdhry. A & Chowdhry. R, *Pre-school children – Development care and Education*, New Age International CP Limited, NAIP publishing, Chennai, 2002.
2. Devadas R.P. & Jaya.N(1991), *Textbook of Child Development*, Macmillan India limited, India
3. Hurlock E. B, (2004). *Child Development*, (6th ed). McGraw Hill Inc., New York.
4. Moony S. G (2013). *Theories of childhood: an introduction Dewey, Montessori, Erikson, Piaget, and Vygotsky*, Trade paperback, USA.
5. 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>
1. <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.	4	Chalk & Talk	LCD & White board
1.3	Early childhood care and development-Role	4	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	Planning activities for children 0-6months 7-12 months 13-24 months 25-36 months,	5	Lecture	PPT& Black 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, Play Equipment's and utensils	4	Chalk & Talk	LCD & Smart 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	4	Lecture	Smart Board
4.2	Subtopics A day's schedule Music, Story, Creative activity, Games, Science Experience	4	Lecture	PPT
4..3	Preschool curriculum – types – child controlled, teacher controlled, child teacher mutually controlled	3	Chalk & Talk	LCD
4.4	Play Definition, Importance of play. Types of play	4	Lecture	PPT
4.5	Play equipment for preschool children	3	Lecture	Green Board Charts

	-Selection and maintenance			
UNIT –V ORGANISATION OF A PRESCHOOL CENTRE				
5.1	Topic 6 Physical setup – essentials of a good building Building plan-rooms, walls, windows, floor, outdoor area	5	Lecture and Group Discussion	Models
5.2	Preschool staff and personnel, Qualities and role.	4	Lecture	Smart Board
5.3	Records and reports, Significance of record keeping, Types of records, maintenance of records in preschool.	5	Lecture	Black Board
5.4	Home-school Relationships Significance,types	4		

	SCHOLASTIC						NON - SCHOLASTIC	MARKS		
							IC	Total Scholastic Marks	Non Scholastic Marks	CIA Marks
C1	C2	C3	C4	C5	C6					
10	10	5	5	5	5				40	60
Levels	T1	T2	Quiz	Assignment	OBT/PPT					Assessment
	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 %

EVALUATION PATTERN

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.**

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

[illegible]

Mapping of COs with POs

CO/ PSO	PO 1	PO 2	PO 3	PO 4	PO 5
CO1					
CO2					
CO3					
CO4					
CO5					

COURSE DESIGNER:

Dr.S.SANTHI

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	19N5SB 3	Entrepreneurial Skills – Bakery, Food Preservation and Adulteration	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, Tutti-frutti, 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-microbia-l-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

	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

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

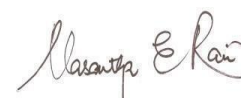
CO/ PSO	PO1	PO2	PO3	PO4
CO1	2	2	2	3
CO2	2	2	2	3
CO3	2	2	2	3
CO4	2	2	2	3
CO5	2	2	2	3

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

COURSE DESIGNER:

Forwarded By

Mrs.J.JosephineJesintha



(Dr.Vasantha Esther Rani)

III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY

SEMESTER –V

For those who joined in 2019 onwards

10%

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
UAHS	19N5SB 3	Entrepreneurial Skills – Baking, Food Preservation and Adulteration	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

5%

UNIT –I INTRODUCTION TO BAKERY AND BAKERY TECHNIQUES

(6HRS.)

Introduction to Bakery, Role of ingredients in baking – Flours, sugar, salt, fats, egg, leavening agents, Baking Techniques – Bread, Cake, Biscuits & Cookies

UNIT –II FOOD PRESERVATION

(6 HRS.)

Introduction, Classification and use of preservatives

UNIT –III METHODS OF FOOD PRESERVATION

5%

(6 HRS.)

Methods of Food preservation, Preparation of Jam, Jelly, Squash, Tomato Ketchups

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:

2. Dearosier. N.N(1975). *The Technology of Food Preservation*.

REFERENCE BOOKS:

6. Lai G. Sideleappa G.B. (1987), *Preservation of Fruits and Vegetables* ICAR, New Delhi.
7. Parvinder S. Bali (2009). *Food Production Operations*, Oxford University Press, New Delhi.
8. Srilakshmi. B, (2008), *Food science*, New age international publishers.
9. Sudesh Jood&Neelani (2002) *Food Preservation*.
10. Thangam E. Philip, (1981). *Modern Cookery*, Vol I, Orient Longman, Mumbai.

• OPEN EDUCATIONAL RESOURCES

6. <https://www.onlinebiologynotes.com/food-preservation-from-microbia-l-spoilage-principle-and-methods/>
7. <https://www.cliffsnotes.com/study-guides/biology/microbiology/food-microbiology/food-preservation>
8. <https://www.intechopen.com/books/food-additives/introductory-chapter-introduction-to-food-additives>
9. <https://gcwgandhinagar.com/econtent/document/1589361321Unit%20V%20Food%20adulteration.pdf>
10. <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	2	Demonstration,	Lab

	adulterants in foods		Hands on Training	
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

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

CIA	
Scholastic	35

Non Scholastic	5
	40

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

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

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

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 ♦
Wakly Correlated -1

COURSE DESIGNER:

Forwarded By

Mrs.J.JosephineJesintha



(Dr.Vasantha Esther Rani)

III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY
SEMESTER –VI

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UAHS	19N6CC1 9	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 mid 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. Skinner Paul (2000) Development of a medical nutrition therapy protocol for female collegiate alhotetes, J. AM. Diet ASS 101
8. 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. Mospy CO.

JOURNAL REFERENCES:

1. Food and Nutrition Bulletin, United Nations University Press, Japan.
2. Journal of American Dietetic Association, American Dietetic Association, Mount Marris, Illinois, 61054, USA.
3. Nutrition Abstracts and Reviews, CBB International, UK
4. Nutrition
5. Reviews, Nutrition Foundation, Washington, DC.
6. The American Journal of Clinical Nutrition, Waverly Press, USA.
7. The Indian Journal of Medical Research, Indian Council of Medical Research, New Delhi.

The Indian Journal of Nutrition and Dietetics, Sri Avinashilingam Deemed University, Coimbatore.

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/cvd/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	2	Chalk & Talk	Black Board

	conditions.			
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 adolescence- nutritional problems of adolescents.	3	Discussion	Black Board
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				
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

[illegible]

CO4	1	1	1	1	1	1	1	1	1	1	1	
CO5	1	1	1	1	1	1	1	1	1	1	1	

Mapping of COs with POs

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

10

%

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UAHS	19N6CC1 9	Clinical Nutrition and Dietetics	Lecture	5	4

COURSE DESCRIPTION

The course gives a detailed picture of the normal & therapeutic nutrition, highlighting the importance, recommended dietary allowance, medical nutrition therapy for various stages of life cycle and all disease conditions.

COURSE OBJECTIVES

- Learn the principles of meal planning, plan and prepare meals for families at different income levels and for special groups.
- Gain knowledge and develop skills and techniques in the planning and preparation of therapeutic diets for nutritional deficiencies.
- To recommend and provide appropriate nutritional care, prevention, and treatment of various diseases

UNITS

UNIT –I NUTRITION FOR DEVELOPMENTAL MILESTONES (20 HRS.)

Meal Planning – Principles of planning meals, meal pattern and its modification to suit to different disease conditions.

1. Nutrition during pregnancy – importance – changes nutritional requirements and complication.
2. Nutrition during lactation – importance, advantages of breast feeding, need for enhanced nutritional requirements.

3. Nutrition during infancy – nutritional requirement, weaning – methods – low-cost supplementary foods.
4. Nutrition for Preschoolers – nutritional requirements, inculcating feeding habits.
5. Nutrition for school children and adolescents – nutritional requirements in adolescence- nutritional problems of adolescents.
6. Geriatric nutrition – changes during old age, nutritional requirements during old age, nutrition related problems of old age.

Self -Study: Nutrition for school children and adolescents – nutritional requirements in adolescence- nutritional problems of adolescents.

UNIT –II DIET THERAPY

(15 HRS.)

Diet therapy – Objectives of therapeutic diets

1. Routine Hospital diet –
 - a.TPN b. EN
2. Modification of diets in different diseases,

Etiology /Pre-disposing factors, clinical symptoms and modification of diets for

1. Obesity and Underweight –

Obesity - Types/Grades of obesity, Assessment of obesity, and Complications of obesity

2. Diabetes mellitus – Types of DM, Diagnosis – Glycosuria, Glucose Tolerance Test

- b. Febrile disease conditions – Typhoid (acute), Tuberculosis (chronic) and Malaria (intermittent).
- c. Gastrointestinal disorders – Peptic- ulcer, diarrhoea, constipation

Self Study: e. Anemia – types.

UNIT-III THERAPEUTIC DIETS FOR HEART, KIDNEY & LIVER DISEASES **(15HRS.)**

Etiology or Pre-disposing factors, clinical symptoms and modification of diets for

1. CVD-Hypertension and Atherosclerosis.

- a) Diseases of urinary tract – Nephritis, Nephrosis, Renal failure.
- b) Diseases of the liver – Hepatitis and Cirrhosis

UNIT –IV DIET IN AIDS AND CANCER (10 HRS.)

Etiology or Pre-disposing factors, clinical symptoms and modification of diets for Cancer

Etiology or Pre-disposing factors, clinical symptoms and modification of diets for AIDS

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 Organizations

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:

2. Carroll, A. Lutz (1997) *Nutrition for Diet Therapy*, Edition – 2, F. A. Davis Company, Philadelphia.
3. Davidson S. Passmore, R. Brock J. K. & Truwell A. S. (1975) *Human Nutrition and Dietetics*, The English Language Book Society and Churchill.
4. Ghosh S (1976). *The feeding and care of Infant and Young children*
5. Gupta L. C. & Kusium Gupta (1989). *Foods and Nutrition, Facts and Figures*, Jayapahothas, New Delhi,
7. Passmore R. Eastwood (1986) *Human Nutrition and Dietetics*, Longman Group Ltd.,
8. Raheena Begum, A. (1989). *Textbook of food, nutrition and dietetics*, Stanley Publishers,

9. Skinner Paul (2000) Development of a medical nutrition therapy protocol for female collegiate athletes, J. AM. Diet ASS 101
10. Swaminathan M. (1988) *Advanced textbook of Food and Nutrition*, Vol. I and II, the Bangalore Printing and Publishing Co., Ltd.,
11. Williams S.R (1977). *Nutrition and Diet Therapy* C.V. Mosby CO.

JOURNAL REFERENCES:

1. Food and Nutrition Bulletin, United Nations University Press, Japan.
2. Journal of American Dietetic Association, American Dietetic Association, Mount Morris, Illinois, 61054, USA.
3. Nutrition Abstracts and Reviews, CBB International, UK
4. Nutrition
5. Reviews, Nutrition Foundation, Washington, DC.
6. The American Journal of Clinical Nutrition, Waverly Press, USA.
7. The Indian Journal of Medical Research, Indian Council of Medical Research, New Delhi.
8. The Indian Journal of Nutrition and Dietetics, Sri Avinashilingam Deemed University, Coimbatore.

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/cvd/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
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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 adolescence- nutritional problems of adolescents.	3	Discussion	Black Board
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				
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

[illegible]

C02	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 COs with POs

CO/ PSO	PO1	PO2	PO3	PO4
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

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UAHS	19N6SB 5	Entrepreneuria 1 Skills – Nutrition Counselling	Lecture / Practical	2	2

COURSE DESCRIPTION

This course provides a strong ground in the strategies and techniques of nutrition counseling, nutrition education, nutrition care plan, evaluation, and documentation.

COURSE OBJECTIVES

- To acquire skills needed for effective counseling sessions related to the field of nutrition and dietetics
- To develop skills for group education and counselling

UNITS

UNIT –I DIET COUNSELLING

(6 HRS.)

Diet Counselling – Definition, Counselling process and its significance.

Dietitian – Role of dietitian, classification, responsibilities and code of ethics. RD, Membership in IDA, NSI.

UNIT –II ASSESSMENT

(6 HRS.)

Assessment - Assessment of needs of patients, Establishing rapport

Communication process, Patient education

UNIT-III CASE STUDIES AND DIET MODIFICATIONS

(6HRS.)

Case studies – Understanding Case Study - Clinical, Nutritional and Biochemical Profile, Therapeutic Modification of Diets, Report Writing

UNIT –IV COUNSELLING CENTER

(6 HRS.)

Counselling Center - Pre requisites and preparation for setting up a counselling center.

Self- study -Preparation of audio - visual aids for diet counselling.

UNIT –V COUNSELLING CAMPS

(6 HRS.)

Counselling Camps - Organizing counselling camps for specific diseases

REFERENCES:

TEXTBOOK:

1. Srilakshmi. B. (2002) .*Dietetics*, New Age International Publishers,

REFERENCE BOOKS:

1. Skinner Paul (2000), *Development of a Medical Nutrition Therapy Protocol for Female Collegiate Athletes*, JAMA 101.
2. Carroll, A. Lutz. (1997).*Nutrition for Diet Therapy*, Edition – 2, F. A. Davis Company, Philadelphia.

OPEN EDUCATION RESOURCES:

1. <https://www.slideshare.net/jippyjack5/diet-counselling-71525270>
2. <https://www.sciencedirect.com/topics/food-science/diet-counseling>
3. <https://www.slideshare.net/DrSusmitaShah/diet-and-diet-counseling>
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/>

III B.Sc. HOME SCIENCE WITH FOOD BIOTECHNOLOGY
SEMESTER –VI

10%

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
UAHS	19N6SB 5	Entrepreneuria 1 Skills – Nutrition Counselling	Lecture / Practical	2	2

COURSE DESCRIPTION

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- To develop skills for group education and counselling

UNITS

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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.)

10%

Counselling Center - Pre requisites and preparation for setting up a counselling center.

Teaching aids used by dietitians- charts, leaflets, posters etc., preparation of teaching material for patients suffering from Peptic ulcer, Anaemia, Hypertension, Diabetes, Atherosclerosis.

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,

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2. <https://www.sciencedirect.com/topics/food-science/diet-counseling>
3. <https://www.slideshare.net/DrSusmitaShah/diet-and-diet-counseling>
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
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K1- Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

EVALUATION PATTERN

SCHOLASTIC					NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	C6	CIA	ESE	Total
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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

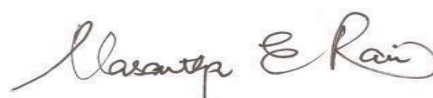
Mapping of COs with PSOs

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)