SRI VENKATESWARA UNIVERSITY::COLLEGE OF SCIENCES
DEPARTMENT OF HOME SCIENCE
CHOICE BASED CREDIT SYSTEM (C.B.C.S) SYLLABUS AS PER NEP 2020
(WITH EFFECT FROM THE ACADEMIC YEAR 2024-2025 onwards

M.S FOOD TECHNOLOGY (FTE)

SEMESTER-III

SI.No	Components of Course	Code	Title of the Course	Hrs/ Week	No. of Credits	SEE	IA	Total
1	**CC**	FTE -301	Unit Operations in Food Industry	**4**	**4**	**70**	**30**	**100**
2		FTE -302	**A-**Cereals, legumes and Oilseed Technology	**4**	**3**	**50**	**25**	**75**
			B-Snack Food Technology					
3		FTE -303	**A-**Fruit and Vegetable Technology	**4**	**3**	**50**	**25**	**75**
			B-Technology of Spices, Condiments and Plantation crops					
4	**P**	FTE -304	**Practical -V(302+303)**	**6**	**2**	**35**	**15**	**50**
5	**SOC**	FTE -305	**A-**Dairy Technology	**4**	**3**	**50**	**25**	**75**
			B-Basic Food Engineering					
6		FTE -306	**A-**Livestock and Sea Food Technology	**4**	**3**	**50**	**25**	**75**
			B-Food Toxicology					
7	**P**	FTE-307	**Practical-VI (305+306)**	**6**	**2**	**35**	**15**	**50**
8	**OOTC**	FTE-308	Open Online Transdisciplinary Course -2 (Or) Essentials of Home Science (Open Elective)	**-**	**2**	**-**	**100**	**100**
				4	**4**	**70**	**30**	**100**
*	Seminar/Tutorial/Remedial classes and Quiz as part of Internal assessment			**4**	**-**	**-**	**-**	**-**
Total				**40**	**22**	**340**	**260**	**600**

SEMESTER-IV

SI.No	Components of Course	Code	Title of the Course	Hrs/ Week	No. of Credits	SEE	IA	Total
1.	**OOSDC**	FTE-401-A	Food Quality Management Systems (or) Open Online Skill Development Courses	4	4	70	30	100
				-	4	100	-	100
		FTE-401-B	Food Business Management (or) Open Online Skill Development Courses	4	4	70	30	100
				-	4	100	-	100
2.	**PW**	FTE-402	Project Work- Orientation Classes (Dissertation -200 Marks, Seminar-50 Marks, Viva- voce -50 Marks)	24	12	300	0	300
*	Conducting classes for competitive exam, communication skills, UGC/CSIR and NET examinations			12	-	-	-	-
Total				**44**	**20**	**500**		**500**
TOTAL SEMESTERS				**144**	**84**	**1320**	**880**	**2200**

SRI VENKATESWARA UNIVERSITY COLLEGE OF SCIENCES

DEPARTMENT OF HOME SCIENCE

SEMESTER – 1II

CORE COURSE (C.B.C.S) NEP 2020 (WEF 2024-2025 ONWARDS)

HSHD -308: OPEN ELECTIVE ESSENTIALS OF HOME SCIENCE

(FSND , HDCW, EMCT & FT)

(Common to all specializations of M.Sc Home Science)

Course Objectives-

To enable the students to:

- Understand the concept, scope, and branches of Home Science.
- Relate various core and applied specializations of Home Science.
- Explain importance of multidisciplinary approach of Home Science in career building.
- Apply knowledge in daily living for better physical and psychological health.

UNIT: I

- Home Science as a field of study of Sciences and Arts.
- Branches of Home Science - Food and Nutrition, Human Development, Extension Education and Communication,Family Resource management Textiles and Clothing.
- Scope of Home Science and Linkages of Home Science with other related subjects.

UNIT: II

- Food and Nutrition: Definition, Importance and Functions of Food. Concept of Nutrition, Basic terms used in the study of Nutrition: Nutrients, Food Groups, Balanced Diet and Food Guide Pyramid, Scope of Food Technology.
- Research developments in Foods & Nutrition and Food Technology
- Careeropportunitiesand entrepreneurship in Food Science – In hospitals, health centers, food industry etc.

UNIT: III

- Human Development-Understanding the terms ‘Growth’, ’Development’ and ‘Developmental Tasks’.
- Principles of growth and development-Determinants of development.
- Stages of development across lifespan and different domains of development – Physical,Cognitive,Emotional and Social development.
- Importance of human relationships for healthy living.

UNIT: IV

- Extension Education and Communication: Concept, Nature, Scope and principles of Extension and communication.
- Importance of Extension of knowledge from University to rural community
- Methods and media of community outreach.
- Government Programmes catering to the rural population and community development.

References:

- Chouhan, A. (2015) “Comprehensive Home Science X”, 1. · Yadav, K and Singh, O. S. (2014) “Home Science”, ISBN 9788126919062, Atlantic Publishers and Distributers Private limited.
- PremlataMullick, P. “Textbook of Home Science”, Kalyani Publishers
- Berk, E.L. (2001).Child development, Prentice Hall of Indics, New Delhi.
- Hurlock, E.B. 2016.Developmental Psychology A Life span Approach. New Delhi: Tata McGraw-HillPublishing Company Ltd.

Course Outcomes:

After studying the course, students will able to:

- Know the various branches of Home Science
- Have a clear understanding of the relevance of Home Science with other disciplines
- Be able to exercise choice towards healthy practices in daily living

SEMESTER-IV
OOSDC - Optional Paper
(C.B.C.S) NEP 2020 WEF 2025-2026 onwards

HSFS/FTE-401-A : Food Quality Management System

Common for Food Science Nutrition and Dietetics (HSFS) & Food Technology (FTE)

Course Objectives - To enable the students to:

1. Impart the knowledge on Food Quality.
2. Provide in-depth knowledge in various Quality Management systems.
3. To analyze the safety operations involved in food system.
4. Develop skills for quality analysis and management of food quality.

THEORY

UNIT-I: Introduction

- Introduction to quality management - Definition, Scope, Significance and Objectives of Quality management;
- Dimensions of quality in foods, Food quality evaluation techniques,
- Quality control Vs Quality assurance.

UNIT-II: Quality Management

- Quality of raw materials, equipment's, quality assurance, ingredient inspection, process control, assessing products for quality.
- Quality control of packaged foods - Intrinsic, extrinsic and shelf life limiting factors.
- Building inspection and routine cleaning programs, process control, microbial and fungal contaminants.

UNIT- III: Operational Procedure in Quality Management

- Fundamentals of Operational Procedures in Food production, GMP, GHP, SOP.
- Management Procedures and HACCP.
- Introduction to Sensory Science and Consumer Evaluation, Panel Selection, Training and Performance Monitoring, Bias in Sensory Analysis, Food Flavor's& texture profile analysis.

UNIT-IV: Management Tools

- Seven old and new Quality management tools, Implementation procedure for ISO 22000, QMS, ISO 9000, BIS, APEDA and Six sigma certifications.
- AGMARK and Codex Alimentary Commission regulations.
- Packaging and labeling regulations for food products.
- Regulations for food products export and imports.

REFERENCES

1. VanishaNambiar. (2004). A Text book on "Food Contamination and Safety " ANMOL Publications Pvt.Ltd. New Delhi .
2. Rajesh Mehta and J.George . (2005). Food Safety Regulation concerns and Trade – The developing country perspective ,Mac millan India Ltd.
3. https://www.fssai.gov.in
4. Amihud Kramer, Bernard A. Twigg, 2017: Quality control for the food industry, Fundamentals & Applications, Volume 1, 3rd Edition, Medtech Scientific International Ltd., Kolkata
5. Swainson, M. (2018). 3 The food safety and quality management system (FS & QMS). *Swainson's Handbook of Technical and Quality Management for the Food Manufacturing Sector*, 29.

Course Outcomes - After the completion of the course, the students will be able to:

CO1 Gain knowledge in current rules and regulations of food quality.

CO2 Select the appropriate analytical technique for quality Management.

CO3 Acquire knowledge on regulations of food quality.

CO4 Apply appropriate methods for food quality management.

CO-PO Mapping

Course	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
CO1	3				3						2	3	3	3
CO2	3	2			3			1			2	3	3	3
CO3	3			2	3			3	3	2	3	3	3	3
CO4	3		3	3	3	2		3	3		3	3	3	3

High-3, Medium-2, Low-1

OOSDC - Optional Paper
(WEF 2025-2026 onwards)

HSFS/FTE – 401-B: Food Business Management

Common for Food Science Nutrition and Dietetics (HSFS) & Food Technology (FTE)

Course Objective To enable the students to:

1. Understand the principle components of food business management.
2. Learn important preliminary requirements for food business management and operation.
3. Know the deep elements of Entrepreneurship, Business Planning, Financial and Cost Management of various food business settings.
4. Impart knowledge on Marketing, Consumer behaviour, Quality aspects, sustainability & Innovations in advanced food business management.

THEORY

Unit I: Introduction to Food Business

- **Scope and classification of food businesses**: India and global perspective, Structure of the Indian and global food industry.
- **Role of food technologists in food business**: Scientific and technical strategies to improve the food business.
- **Emerging trends in food business**: organic, clean label, plant-based, ready-to-eat and lab grown foods.
- **Hybridization and advanced food business opportunities and future trends**: Smart food technologies, Alternative foods, Functional and personalized nutrition, Direct to consumer (D2C) and subscription type (Food as service (FaaS)), Cloud kitchen, Form to fork business models.

Unit II: Basics of Food Business Management

- **Principles of management**: planning, organizing, staffing, directing, and controlling; Basic requirements compensating elements for food business management.
- **Sources & Utilization**: raw materials, financial sources, human resources, infrastructure and utilities, technical knowledge sources, information & networking for marketing and distribution, waste utilization and sustainability.
- **Supply chain and logistics**: Supply chain management for perishable goods; Cold chain logistics and warehousing; Inventory control and distribution strategies; E-commerce and digital platforms in food marketing.

Unit III: Food Entrepreneurship, Business Planning, Financial and Cost Management

- Idea generation and feasibility analysis; Components of a food business plan; Project report preparation and techno-economic feasibility; Government schemes and funding agencies (e.g., MSME, PMFME, NABARD, APEDA).
- Basics of food business accounting; Cost analysis: fixed, variable, and break-even; Pricing strategies for food products; Budgeting and working capital management.
- **Human Resources & Management**: Definition, importance, functions of human resource management in food business.

Unit IV: Marketing, Consumer Behaviour, sustainability & Innovations

- **Fundamentals of marketing**: 4Ps in the context of food; Market segmentation, targeting, and positioning; Branding, packaging, and labeling strategies; Role of technology and digital transformation on food product marketing.
- **Consumer Needs & Market Dynamics**: Understanding the food consumer; Consumer behaviour and buying decision Process; Market research and consumer requirements; Responding and addressing consumer needs.
- **Sustainability and Innovation:** Waste management and valorization in food production; Role of technology and digital transformation; Innovations in product, process and business models.

REFFERENCES

1. Davis, B., Lockwood, A., Pantelidis, I., Alcott, P. (2013). Food and Beverage Management. United Kingdom: Taylor & Francis.
2. Food Production Management. United States, Canning Trade, 2007.
3. Mor, R. S., Kamble, S. S., & Sangwan, K. S. (Eds.). (2022). *Operations and Supply Chain Management in the Food Industry: Farm to Fork*. Springer Nature.
4. Entrepreneurial Finance: Planning And Managing Small Businesses. N.p., Academic Guru Publishing House.
5. Jongen, W.M.F., & Meulenberg, M.T.G. (Eds.). (04 Sep. 2023). Innovation in agri-food systems. Leiden, The Netherlands: Wageningen Academic. https://doi.org/10.3920/978-90-8686-666-3.
6. Sustainable Food Supply Chains: Planning, Design, and Control Through Interdisciplinary Methodologies. United Kingdom, Elsevier Science, 2019.
7. Sustainable Food Systems from Agriculture to Industry: Improving Production and Processing. Netherlands, Academic Press, 2018.

Course Outcomes- After the completion of the course, the students will able to:

CO1 Understand and comprehend the principle of food business management
CO2 Operate important preliminary operations in food business strategies.
CO3 Skilled up with various Food Entrepreneurship, Business Planning, Financial and Cost Management plans.
CO4 Gain knowledge on apply various Marketing, Consumer Behaviour, Quality, sustainability & Innovations techniques in food business management.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	**3**				**3**							**3**	**3**	**3**
CO2	**3**				**3**	**1**						**3**	**3**	**3**
CO3	**3**	**2**						**1**				**3**	**3**	**3**
CO4	**3**				**3**							**3**	**3**	**3**

High- 3, Medium- 2, Low- 1

Model Question paper

Fourth Semester

OOSDC- Optional Paper

HSFS/FTE-401-A: : Food Quality Management System

Time: 3 Hrs **Max: 70 Marks**

Part – A

Answer any four questions

Each question carry equal marks (4X5=20 Marks)

1.
2.
3.
4.
5.
6.
7.
8.

Part – B

Answer all questions

Each question carry equal marks (4X12.5 = 50 Marks)

9. a)

(Or)

b)

10. a)

(Or)

b)

11. a)

(Or)

b)

12. a)

(Or)

b)

Model Question paper

Fourth Semester

OOSDC- Optional Paper

HSFS/FTE :401-B : Food Business Management

Time: 3 Hrs **Max: 70 Marks**

Part – A

Answer any four questions

Each question carry equal marks (4X5=20 Marks)

1.
2.
3.
4.
5.
6.
7.
8.

Part – B

Answer all questions

Each question carry equal marks (4X12.5 = 50 Marks)

9. a)

(Or)

b)

10. a)

(Or)

b)

11. a)

(Or)

b)

12. a)

(Or)

b)