

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI**

**Course Schedule: November 2024 – April 2025**

**Department : B.VOC FOOD PROCESSING AND QUALITY CONTROL**  
**Name/s of the Faculty : DR. SUBHASHREE.S**  
**Course Title : FOOD SAFETY AND MANAGEMENT**  
**Course Code : 16VF/VM/FS66**  
**Shift : II**

<b>Week &amp; No. of hours</b>	<b>Units &amp; Topics</b>	<b>Teaching Methodology</b>	<b>Text &amp; References</b>	<b>Method of Evaluation</b>
Nov 18 – 25, 2024 (Day Order 1-6)	<b>Unit 1</b> <b>Introduction to Quality Management</b> 1.1 Definition, scope, significance and objectives of Food Quality Management  1.2 Dimensions of quality in foods,	Lecture	Andres Vasconcellos J. 2015, Quality Assurance for food industry- a practical approach, CRC Press.	Oral discussion
Nov 26- Dec 3, 2024 (Day Order 1 to 6)	1.2 Evaluation techniques, Quality Control versus Quality Assurance	Lecture	Kher, C.P., Quality Control for food industry, ITC Publishers, Geneva 2000	Oral discussion
Dec 4-11, 2024 (Day Order 1 to 6)	1.3 Quality assurance for raw material, in process and processed products, safe handling and hygiene requirements for personnel equipment	Lecture with discussion	Luning, P.A. & Marcelis, W.J. (2009), Food Quality Management, technological and managerial principles and practices, Wageningen academic publishers  Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Oral discussion
Dec 12-19, 2024	<b>Unit 2 Quality Management Tools</b>	Lecture with presentation	Andres Vasconcellos J. 2015, Quality	Graphical

(Day Order 1 to 6)	2.1 Tools to aid in Quality Management  2.2 Quality audit and internal audit.		Assurance for food industry- a practical approach, CRC Press.	Quiz
Dec 20, 2024 (Day Order 1 )	2.2 Quality audit and internal audit.	Lecture	Andres Vasconcellos J. 2015, Quality Assurance for food industry- a practical approach, CRC Press.	Test
Jan 3 – 7, 2025 (Day Order 3 to 6)	2.3 Proficiency testing for product quality, six sigma concept, continuous up gradation and improvement of productivity	Lecture	Andres Vasconcellos J. 2015, Quality Assurance for food industry- a practical approach, CRC Press.	Test
Jan 8 – 17, 2025 (Day Order 1 to 6)	<b>Unit 3 Food Safety Procedures</b> 3.1 HACCP - Principle, Implementation of HACCP for Jam, Bakery products, dairy products, Meat, fish and egg industries  3.2Pre-requisite programmes – Good Manufacturing Practices, Personal hygiene,	Presentation	Sara Mortimore and Carol Wallace, 2013 HACCP - A practical approach, 3rd edition, Chapman and Hall, London.  Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Case study analysis
Jan 18 - 23, 2025	<b>C.A. Test – I</b>			
Jan 24 - 30, 2025 (Day Order 1 to 6)	3.2 Occupational health and safety specification, differences between PRP and OPRP, Traceability and accountability  3.3 Food Plant sanitation management, exterior and interior maintenance, safety procedures during transportation, storage and scaling up	PPT	Sara Mortimore and Carol Wallace, 2013 HACCP - A practical approach, 3rd edition, Chapman and Hall, London.	Assignment

Feb 3-8, 2025 (Day Order 1 to 6)	<b>Unit 4 Quality Management Certifications and Regulations</b> 4.1 Implementation procedures for HACCP, ISO 9000 (QMS), ISO 22000 (FSMS), FSSC-FSSAI, APEDA, BRC, BIS, six sigma certifications, Intellectual Property Rights (IPR) 4.2 AGMARK and Codex alimentarius commission - CAC	Lecture	Sara Mortimore and Carol Wallace, 2013 HACCP - A practical approach, 3rd edition, Chapman and Hall, London.	Exploration of AGMARK website and discussion
Feb 10– 18, 2025 (Day Order 1 to 4)	4.3 Export and Import regulation for food produce – raw and processed	Lecture	DGFT	Self study and discussion
Feb 19- 26, 2025 (Day Order 1-6)	Component			
Feb 27- Mar 6, 2025 (Day Order 1 to 6)	4.4 Packaging and Labeling regulations for different types of food	Lecture	FSSAI regulation	Reading of food labels
Mar 7 – 11, 2025 (Day Order 1 to 3)	<b>Unit 5 Environmental Quality Management System</b> 5.1 Effluent treatment plant location, requirements and maintenance	Lecture	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Discussion
Mar 12 –17, 2025	<b>C.A. Test – II</b>			
Mar 18 – 20, 2025 (Day 4 to 6)	5.2 Technology for eco-friendly food processing and food Packaging	Lecture	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Oral revision
Mar 21 - 28, 2025 (Day Order 1 to 6)	5.3 Challenges in Quality management and Green processing system implementation	Lecture	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Oral Revision
Mar 29- April 3, 2025	5.3 Challenges in Quality management and Green processing system implementation	Lecture	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill	Oral Revision

(Day Order 1 to 3)			education	
	<b>REVISION</b>			

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI**

**Course Schedule – November 2024 – April 2025**

**Department : B.VOC FOOD PROCESSING AND QUALITY CONTROL**  
**Name/s of the Faculty : Dr. J. SONYA**  
**Course Title : WASTE MANAGEMENT IN FOOD INDUSTRY**  
**Course Code : 16VF/VM/WM66**  
**Shift : II**

<b>Week &amp; No. of hours</b>	<b>Units &amp; Topics</b>	<b>Teaching Methodology</b>	<b>Text &amp; References</b>	<b>Method of Evaluation</b>
Nov 18 – 25, 2024 (Day Order 1-6)	<b>Unit 1 Impact of Waste Generation in Food Industry</b> 1.1 Food Industry Wastes, Food Waste Treatment, necessity of food waste utilization 1.2 Types of Waste and magnitude of waste generation in different Food Processing industries 1.3 Concept, Scope and Importance of Waste Management and Effluent Treatment	Lecture, Focussed Discussion ,Ppt	Yapijakis, C. L.Wang, Yung Tse-Hung, H. LO, <i>Waste treatment in the food processing industry.</i> New Delhi. CRC,2005	Assignments, Models Charts
Nov 26- Dec 3, 2024 (Day Order 1 to 6)	<b>Unit2 Environmental Standards and Waste characterization</b> 2.1 ISO14001 standards, Environmental Legislation 2.2 Treatment according to established standards and directives, environmental best – practice technologies for Waste Minimization, Environmental Protection Act and specification for effluent of different Food Industries	Lecture, with PPT	Smith, R., J. Klemes, J-K Kim “ <i>Handbook of water and energy management in food processing.</i> ”, New Delhi. CRC, 2008.	Group discussion , Activity

Dec 4-11, 2024 (Day Order 1 to 6)	<b>Unit 3 Effluent Treatment and Testing (Theory and Practicals)</b> 3.1 Treatment – Pre-treatment of waste: sedimentation, coagulation, flocculation and floatation	Focused discussion with subject oriented videos	Smith, R., J. Klemes, J-K Kim “ <i>Handbook of water and energy management in food processing.</i> ”, New Delhi. CRC, 2008.	Assignment , Charts or models
Dec 12-19, 2024 (Day Order 1 to 6)	3.2 Secondary treatments: Biological oxidation –trickling filters, oxidation ditches,	Lecture with ppt	Waldron, K “ <i>Handbook of waste management and co-product recovery in food processing</i> ”. New Delhi. CRC, 2007.	Assignment , Charts or models
Dec 20, 2024 (Day Order 1)	3.2 contd.. activated sludge process, rotating biological contractors, aerated lagoons	Lecture with PPT	Waldron, K “ <i>Handbook of waste management and co-product recovery in food processing</i> ”. New Delhi. CRC, 2007.	Assignment , Charts or models
Jan 3 – 7, 2025 (Day Order 3 to 6)	3.3 Tertiary treatments	Focussed discussion with lecture	Yapijakis, C. L.Wang, Yung Tse-Hung, H. LO, <i>Waste treatment in the food processing industry.</i> New Delhi. CRC,2005	Charts or models
Jan 8 – 17, 2025 (Day Order 1 to 6)	3.4 Testing – pH, BOD, COD, fat, oil and grease content, Metal content, Phosphorus and Sulphur in waste waters	Lecture , testing of samples	Smith, R., J. Klemes, J-K Kim “ <i>Handbook of water and energy management in food processing.</i> ”, New Delhi. CRC, 2008	Group discussion and Practical
Jan 18 - 23, 2025	<b>C.A. Test – I</b>			
Jan 24 - 30, 2025 (Day Order 1 to 6)	3.4 Microbiology of wastes, Insecticides, Pesticides and Fungicides residues.	Lecture , testing of samples	Oreopoulou, V. Russ, W (ed) <i>Utilisation of by-products and treatment of waste in the food industry</i> ” Vol, 3., Springer, 2007.	Group discussion and Practicals
Feb 3-8, 2025 (Day Order 1 to 6)	<b>Unit 4 Waste Utilization of Agro Industries (Theory and Practicals)</b> 4.1 Characterization and utilization of by-products from Cereals, Pulses and oilseeds	Lecture with focused discussion	Oreopoulou, V. Russ, W (ed) <i>Utilisation of by-products and treatment of waste in the food industry</i> ” Vol, 3., Springer,	Models, charts, Case study presentation

			2007.	
Feb 10– 18, 2025 (Day Order 1 to 4)	4.2 Fruits and Vegetables and Plantation Crops	Lecture with focused discussion	Oreopoulou, V. Russ, W (ed) “ <i>Utilisation of by-products and treatment of waste in the food industry</i> ” Vol, 3., Springer, 2007	Assignment with models
Feb 19- 26, 2025 (Day Order 1- 6)	4.3Vermicomposting of Wastes from Food Industries	Lecture with ppt and activity	Ismail S.A., <i>The Earthworm Book</i> , Goa: India, 2005, Oreopoulou, V. Russ, W (ed) “ <i>Utilisation of by-products and treatment of waste in the food industry</i> ” Vol, 3., Springer, 2007	Group activity with model display
Feb 27- Mar 6, 2025 (Day Order 1 to 6)	<b>Unit5 Waste Utilization of Animal and Marine Product Industries</b> 5.1Characterization and utilization of by-products from dairy industries	Lecture with PPT	Oreopoulou, V. Russ, W (ed) “ <i>Utilisation of by-products and treatment of waste in the food industry</i> ” Vol, 3., Springer, 2007.	Assignment
Mar 7 – 11, 2025 (Day Order 1 to 3)	5.1 Utilization of by-products from dairy industries	PPT	Oreopoulou, V. Russ, W (ed) “ <i>Utilisation of by-products and treatment of waste in the food industry</i> ” Vol, 3., Springer, 2007.	Sample collection of byproducts from dairy
Mar 12 –17, 2025	<b>C.A. Test – II</b>			
Mar 18 – 20, 2025 (Day 4 to 6)	5.2 Utilization of wastes from poultry, Meat...	Lecture with discussion	Yapijakis, C. L.Wang, Yung Tse- Hung, H. LO, <i>Waste treatment in the food processing industry</i> . New Delhi. CRC,2005	Group Discussion

Mar 21 - 28, 2025 (Day Order 1 to 6)	5.2 Utilization of wastes from Fish and Marine Processing Industries	Lecture with discussion	Yapijakis, C. L.Wang, Yung Tse- Hung, H. LO, <i>Waste treatment in the food processing industry.</i> New Delhi. CRC,2005	Assignment, case study interpretations.
Mar 29- April 3, 2025 (Day Order 1 to 3)	5.2 Utilization of wastes from Fish and Marine Processing Industries	Lecture with discussion	Yapijakis, C. L.Wang, Yung Tse- Hung, H. LO, <i>Waste treatment in the food processing industry.</i> New Delhi. CRC,2005	Assignment, case study interpretations.
	<b>REVISION</b>			



**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI**

**Course Schedule: November 2024 – April 2025**

**Department : B.Voc Food Processing and Quality Control**  
**Name/s of the Faculty : DR. ANBU MALAR. M & Ms. SHANTHA ASHWINKUMAR**  
**Course Title : 16VF/VM/PT66**  
**Course Code : EMERGING TRENDS IN FOOD PROCESSING AND TECHNOLOGY**  
**Shift : II**

<b>Week &amp; No. of hours</b>	<b>Units &amp; Topics</b>	<b>Teaching Methodology</b>	<b>Text &amp; References</b>	<b>Method of Evaluation</b>
Nov 18 – 25, 2024 (Day Order 1-6)	<b>Unit1:Minimal Processing</b> 1.1 Minimal fresh processing of vegetables, fruits and juices. 1.2 Minimal Processing of ready meals. 1.3 Modified atmosphere packaging for minimally processed foods	PPT and Lecture	Food Processing Handbook Edited by James .G. Brennan	Activity or Quiz
Nov 26- Dec 3, 2024 (Day Order 1 to 6)	<b>Unit2: Pulsed Electric Fields Processing</b> 2.1 Overview of Pulsed electric field processing for food. 2.2 Pulsed electric field processing of liquid foods and beverages.	PPT with lecture	Food Bio deterioration and Preservation Edited by Gary .S. Tucker  & Food Processing Handbook Edited by James .G. Brennan	Assignment, model or group presentation.
Dec 4-11, 2024 (Day Order 1 to 6)	2.3Effect of High Intensity Electric Field Pulses on solid foods 2.4 Enzymatic Inactivation of Pulsed electric field	PPT with lecture	Food Biodeterioration and Preservation Edited by Gary .S. Tucker & Food Processing Handbook Edited by James .G. Brennan	Presentation/Activity
Dec 12-19, 2024 (Day Order 1 to 6)	2.5 Food Safety Aspects of Pulsed Electric Fields  <b>Unit 3</b> <b>Food Irradiation and High</b>	PPT and lecture	Food Processing Handbook Edited by James .G. Brennan  Understanding Food Processing and	Case study analysis

	<b>Pressure Processing</b> 3.1 Food Irradiation – advantages and applications, microwave processing –	Lecture with discussion	Technology by Muranno	Quiz
Dec 20, 2024 (Day Order 1 )	3.1 interaction with food materials	Lecture with discussion	Understanding Food Processing and Technology by Muranno	Quiz
Jan 3 – 7, 2025 (Day Order 3 to 6)	3.2 High Pressure processing of foods: An Overview – principles – equipment	Lecture with PPT	Understanding Food Processing and Technology by Muranno	Model making
Jan 8 – 17, 2025 (Day Order 1 to 6)	3.3 Microbiological aspects of High – Pressure Processing	Lecture, videos	Understanding Food Processing and Technology by Muranno & Food Processing Handbook Edited by James .G. Brennan	Case study presentation
Jan 18 - 23, 2025	<b>C.A. Test – I</b>			
Jan 24-Jan 30 ,2025 (Day order 1 to 6)	<b>Unit 4 Ohmic Heating</b> 4.1 Application of heat and ultrasound – inactivation of microorganisms and enzymes	Lecture, PPT	Understanding Food Processing and Technology by Muranno & Food Processing Handbook Edited by James .G. Brennan	Assignment or quiz
Feb 3-8, 2025 (Day Order 1 to 6)	4.2 Electrical resistance heating of food – ohmic heating models	Videos	Understanding Food Processing and Technology by Muranno & Food Processing Handbook Edited by James .G. Brennan	Model or chart
Feb 10– 18, 2025 (Day Order 1 to 4)	4.2contd.. – treatment of products – high voltage pulse techniques –	Lecture with discussion	Understanding Food Processing and Technology by Muranno & Food Processing Handbook Edited by	Presentation

			James .G. Brennan	
Feb 19- 26, 2025 (Day Order 1- 6)	4.2 contd.. elsteril process, influence on microorganism, food ingredients	Lecture and video	Understanding Food Processing and Technology by Muranno & Food Processing Handbook Edited by James .G. Brennan	Quiz
Feb 27- Mar 6, 2025 (Day Order 1 to 6)	4.3 Decontamination of packaging – decontamination of microorganism by surface treatment	Lecture with PPT	Understanding Food Processing and Technology by Muranno & Food Processing Handbook Edited by James .G. Brennan	Model making
Mar 7 – 11, 2025 (Day Order 1 to 3)	Unit 5: Innovation in food Refrigeration 5.1 Vacuum cooling of foods	Lecture with PPT	Understanding Food Processing and Technology by Muranno & Food Processing Handbook Edited by James .G. Brennan	Assignment
Mar 12 –17, 2025	<b>C.A. Test – II</b>			
Mar 18 – 20, 2025 (Day 4 to 6)	5.2 Ultrasonic Assistance of food freezing	Lecture with discussion	Food Processing Handbook Edited by James .G. Brennan	Presentation
Mar 21 - 28, 2025 (Day Order 1 to 6)	5.3High pressure freezing	Lecture with videos	Food Processing Handbook Edited by James .G. Brennan	Presentation , quiz
Mar 29- April 3, 2025 (Day Order 1 to 3)	5.4 Controlling the freezing process with Antifreeze Proteins	Lecture with discussion	Food Processing Handbook Edited by James .G. Brennan	Model or charts
	<b>REVISION</b>			