

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

**Course Schedule – November 2018 – April 2019**

**Department** : B. Voc. Food Processing and Quality Control  
**Name/s of the Faculty** : Ms. Deepika. K and Dr. Anbu Malar  
**Course Title** : Bakery and Dairy Technology  
**Course Code** : 16VF/VM/BD26  
**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. 14 - 20, 2018 (Day Order 1 to 6)	<b>Unit 1</b> 1.1 Physical, Chemical and Microbial Properties of Milk (Ms. Deepika. K) 1.2. Test for Quality Control in Milk (Practicals) (Ms. Deepika. K) Lactometer, Methylene blue reduction test, Resazurin test, Phosphatase test, Stormy clot test and Estimation of Specific Gravity and Acidity of Milk Dr. Anbu Malar)	Lecture, Demonstration	Aantakrishnan. C.P. Khan. A.Q. and P.N. Padmnabhan. <i>The Technology of Milk Processing.</i> India: Shrilaksmi Publication, 1993	Practical experiments
Nov. 22 - 29, 2018 (Day Order 1 to 6)	<b>Unit 2</b> 2.1 Chilling Methods (Ms. Deepika. K) 2.2 Pasteurization, Sterilization, Homogenization, Standardization and grading and Packaging of Milk (Ms. Deepika. K) 2.3 Cleaning and Sanitization Structure and layout of Dairy industry and Dairy effluent treatment (Dr. Anbu Malar)	Lecture with ppt	Aantakrishnan. C.P. Khan. A.Q. and P.N. Padmnabhan. <i>The Technology of Milk Processing.</i> India: Shrilaksmi Publication, 1993	Test

Nov. 30 – Dec 06, 2018 (Day Order 1 to 6)	2.4 Manufacture of Dairy Products-Butter, Ghee, Cheese-Cheddar, Cottage Cheese, Yoghurt and Curd (Ms. Deepika. K) 2.4 Use of dairy products in baking (Dr. Anbu Malar)	Video play with lectures	Aantakrishnan. C.P. Khan. A.Q. and P.N. Padmnabhan.	Assignment
Dec 07 - 14, 2018 (Day Order 1 to 6)	<b>Unit 3</b> 3.1 Principles of Baking (Ms. Deepika. K) 3.1 Baking Oven types (Dr. Anbu Malar)	Lecture	Hatcher Jo. <i>Cooking on Bread Line</i> , New York: Thomson Publication, 1977	Practical and quiz
Dec. 15 - 21, 2018 (Day Order 1 to 6)	3.2 Bread Making: Procedures for Bread Making (Ms. Deepika. K) Types of Bread (Dr. Anbu Malar)	Lecture	Hinde Cecilia H. <i>Your Book of Breadmaking</i> , London: Faber and Faber, 1983	Test
Jan. 03- 09, 2019 (Day Order 1 to 6)	3.3 Common Defect in Bread Making and Bread Improvers (Dr. Anbu Malar)	Lecture combined with practical class	do	Practical assessment
Jan. 10- 21, 2019 (Day Order 1 to 6)	3.4 Maintenance of Sanitation and Hygiene in Bakery unit (Ms. Deepika. K)	Lecture class	do	Practical assessment
Jan. 22, 2019 (Day Order 1)	<b>Unit 4</b> 4.1 Leavening Agents Definition, Role of Water in Baking (Ms. Deepika. K)	Lecture	do	Assignment
Jan.23 - 29, 2019	<b>C.A. Test</b>			
Jan.30 – Feb 05, 2019 (Day Order 2 to 6)	4.2 Physical, Chemical and Biological Leavening Agents (Dr. Anbu Malar)	Lecture	Hatcher Jo. <i>Cooking on Bread Line</i> , New York: Thomson Publication, 1977	Assignment
Feb.06 - 13, 2019	4.3 Wheat flour, Fats	Lecture	do	Assignment

(Day Order 1 to 6)	and Sugar:-Types (Ms. Deepika. K) Their roles in Baking (Dr. Anbu Malar)			
Feb.14 - 21, 2019 (Day Order 1 to 6)	4.3 Sugar:-Types and their roles in Baking (Dr. Anbu Malar) <b>Unit 5</b> 5.1 Cakes , Biscuits – Ingredients, Types and Preparation (Ms. Deepika. K)	Lecture		Assignment
Feb.22 – Mar. 01, 2019 (Day Order 1 to 6)	5.1 Cookies – Ingredients, Types and Preparation (Ms. Deepika. K) 5.2 Pastries:- Confectionery Fats (Dr. Anbu Malar)	Lecture combined with practical class		Practical assessment
Mar 04 -11, 2019 (Day Order 1 to 6)	5.2 Pastries:- Icings and Glazings (continuation) (Dr. Anbu Malar)	Lecture combined with practical class	Catherine Atkinson. <i>Chocolate</i> , U. K.: Star Fire, 2003	Practical assessment
Mar. 12 - 19, 2019 (Day Order 1 to 6)	5.3 Gums, Pectin and Gelatin in Confectionary (Ms. Deepika. K)	Lecture combined with practical class	Hatcher Jo. <i>Cooking on Bread Line</i> , New York: Thomson Publication, 1977	Practical assessment
Mar. 20 - 26, 2019 (Day Order 1 to 6)	5.4 Chocolate Confectionary Theory: (Dr. Anbu Malar) Practical: (Ms. Deepika. K)	Lecture combined with practical class	Catherine Atkinson. <i>Chocolate</i> , U. K.: Star Fire, 2003	Practical assessment
Mar. 27 - 28, 2019 (Day Order 1 to 2)	<b>REVISION DAYS</b>			

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

**Course Schedule – November 2018 – April 2019**

**Department** : B.Voc Food Processing and Quality Control  
**Name/s of the Faculty** : Dr. J. Sonya & Dr. M. Anbu malar  
**Course Title** : Basic Principles of Food Processing and Preservation  
**Course Code** : 16VF/VM/PP26  
**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>
November 14 – 20, 2018 (Day Order 1 to 6)	Unit 1: Introduction 1.1 Food deterioration: Causes and Consequences 1.2 Scope and importance of food Processing	PPT and Lecture	Gary .S. Tucker. Food Biodeterioration and Preservation.	Test
November 22 – 29, 2018 (Day Order 1 to 6)	1.3 Historical development in food processing	PPT and Lecture	James .G. Brennan, Food Processing Handbook.	Assignment and Focused group Discussion
November 30 – December 6, 2018 (Day Order 1 to 6)	Unit 2 Principles of Food preservation  2.1 Preservation and Processing by heat. Effect of heat on microorganisms, Thermal death time and canning procedure	PPT and Demonstration	Gary .S. Tucker. Food Biodeterioration and Preservation.	Test and Practical
December 7 - 14, 2018 (Day Order 1 to 6)	2.2 Preservation and processing by cold and chill storage – Types of cold preservation, air circulation, humidity and modified atmosphere	PPT and Demonstration	Gary .S. Tucker, Food Biodeterioration and Preservation.	Practical

December 15 - 21, 2018 (Day Order 1 to 6)	2.3 Preservation and processing by drying – Methods and advantages of drying	PPT and Demonstration	James .G. Brennan, Food Processing Handbook.	Practical
January 3 - 9, 2019 (Day Order 1 to 6)	Unit 3 Processing Techniques 3.1 Cereal Millets – in baking industry: different methods of making dough on quality of Indian breads 3.2 Pulses and Wheat – Study of development of gluten in fermented doughs 3.3 Nuts – Effect of roasting of nuts and oil seeds	PPT and Demonstration	Muranno, Understanding Food Processing and Technology.	Quiz and Practical
January 10 - 11, 2019 (Day Order 1 to 2)	3.3 Eggs – Role of egg white and yolk for different bakery product	PPT and Demonstration	Muranno, Understanding Food Processing and Technology.	Practical
January 17 - 22, 2019 (Day Order 3 - 6 & 1)	3.3 Eggs – Role of egg white and yolk for different bakery product	do	do	Practical
January 23 - 29, 2019	CA Test			
January 30 – February 5, 2019 (Day Order 2 to 6)	Unit 4 High Protein Technology 4.1 Extruded food – Principle and process 4.2 Texturized vegetable protein	Lecture, PPT and demonstration	Gary .S. Tucker, Food Biodeterioration and Preservation	Test and Practical

February 6 -13, 2019 (Day Order 1 to 6)	4.3 Extracted soya bean protein	Lecture, PPT and demonstration	Muranno, Understanding Food Processing and Technology.	Product making
February 14 -21, 2019 (Day Order 1 to 6)	4.4 Fermented products of soya bean – soya sauce	Lecture and demonstration	Muranno, Understanding Food Processing and Technology.	Test
February 22 – March 1, 2019 (Day Order 1 to 6)	Unit 5: Novel methods of preservation using ionizing radiation	Lecture and Demonstration	James .G. Brennan, Food Processing Handbook.	Assignment and test
March 4 -11, 2019 (Day Order 1 to 6)	5.1 Kinds of radiation and their application in food processing	PPT and Demonstration	Gary .S. Tucker, Food Biodeterioration and Preservation.	Test and Practical
March 12 -19, 2019 (Day Order 1 to 6)	5.2 Cryogenic and instant freezing	PPT and Lecture	Muranno, Understanding Food Processing and Technology.	Quiz
Mar. 20 - 26, 2019 (Day Order 1 to 6)	5.3 Effects and safety of food irradiation	PPT and Lecture	do	test
Mar. 27 - 28, 2019 (Day Order 1 to 2)	REVISION DAYS			

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

**Course Schedule – November 2018 – April 2019**

**Department** : **B.Voc. Food Processing & Quality Control**  
**Name/s of the Faculty** : **Ms. Shantha**  
**Course Title** : **Principles of Basic Nutrition**  
**Course Code** : **16VF/VA/PN25**  
**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>
November 14 – 20, 2018 (Day Order 1 to 6)	1.1 Introduction to Nutrition - Definition of Nutrition and Nutrients, interrelationship between Nutrition and Health 1.2 Food Guide - Basic food groups, usage of the food guide	Lecture, ppt	Srilakshmi B, Nutrition Science, New Age International Pvt. Ltd., 6th edition	Discussion and Quiz
November 22 – 29, 2018 (Day Order 1 to 6)	1.3 Role of Water in Nutrition 2.1 Classification of foods - Energy Yielding, Body building, Protection and Regulation, and Maintenance foods	Lecture, ppt, charts	do	Test and chart making
November 30 – December 6, 2018 (Day Order 1 to 6)	2.2 Nutritive Value of Cereals, Pulses and Oil 2.3 Nutritive Value of Meats, Chicken, Seafood and Milk, (Probiotics) 2.4 Nutritive Value of Vegetables and Fruits 2.5 Traditional food additives (spices and condiments)	Lecture, ppt, videos and charts	Swaminathan. M. <i>Handbook of Food and Nutrition</i> . Bangalore: Bangalore Printing and Publishing, 2012	Test and problem solving Crossword. III component
December 7 - 14, 2018 (Day Order 1 to 6)	3.1 Carbohydrates - Source, functions Normal levels and digestion and Absorption, RDA 3.2 Proteins - Source, Daily Requirement,	Lecture, ppt	do	Test and Quiz

	Functions, Essential Amino Acids, Digestion and Absorption, RDA			
December 15 - 21, 2018 (Day Order 1 to 6)	3.3 Fats - Sources, Daily Requirement, Functions, Essential Fatty Acids, Digestion and Absorption, RDA 3.4 Balanced Diet - Guidelines for Healthy Eating, Calculation of Energy and Percentage of Macronutrients in Foods	Lecture, ppt	Bamji MS. Rao NA. & Reddy V. <i>Textbook of Human Nutrition</i> , Oxford & IBH, 2003	Test
January 3 - 9, 2019 (Day Order 1 to 6)	4.1 Sources, Functions, bio-availability of Calcium & Iron	Lecture, ppt	do	Test
January 10 - 11, 2019 (Day Order 1 to 2)	4.1 Sources, Functions, bio-availability of Iodine, Fluorine, Sodium, Potassium (elementary treatment)	Lecture, ppt	do	Test
January 17 - 22, 2019 (Day Order 3 - 6 & 1)	4.2 Effects of deficiencies of Calcium, Iron, Iodine, Fluorine and their symptoms and remedial measures	Lecture, ppt and videos	Srilakshmi. B, Nutrition Science, New Age International Pvt. Ltd, 6th edition	Test and Quiz
January 23 - 29, 2019	<b>C.A. Test</b>			
January 30 – February 5, 2019 (Day Order 2 to 6)	4.2 Effects of deficiencies of Sodium and Potassium, their symptoms and remedial measures	Lecture, ppt and videos	do	Test and Quiz
February 6 -13, 2019 (Day Order 1 to 6)	5.1 Classification, Sources, Functions (elementary treatment) of the following vitamins, Fat soluble vitamins – A and D	Lecture, charts and ppt	do	Test and Discussion
February 14 -21, 2019 (Day Order 1 to 6)	5.2 Effects of deficiency, symptoms & vitaminosis of vitamin A & D			Reports
February 22 – March 1, 2019 (Day Order 1 to 6)	5.1 Classification, Sources, Functions (elementary treatment) of			Reports



	the following vitamins - Fat available vitamins E and K - Water soluble vitamins - ascorbic acid			
March 4 -11, 2019 (Day Order 1 to 6)	5.2 Effects of deficiencies of vitamins E, K and ascorbic acid, symptoms & vitaminosis			Reports
March 12 -19, 2019 (Day Order 1 to 6)	5.1 Water soluble vitamins - Thiamine, Riboflavin and Niacin 5.2 Effect of deficiencies of the above vitamins & their symptoms	Lecture, charts and ppt	Srilakshmi. B, Nutrition Science, New Age International Pvt. Ltd, 6th edition	Test and Discussion
Mar. 20 - 26, 2019 (Day Order 1 to 6)	5.3 Effect of cooking on vitamins	Lectures, charts and ppt	do	Test and Discussion
Mar. 27 - 28, 2019 (Day Order 1 to 2)	<b>REVISION DAYS</b>			

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

**Course Schedule – November 2018 – April 2019**

**Department** : B. Voc. Food Processing & Quality Control  
**Name/s of the Faculty** : Dr. M. Anbu Malar  
**Course Title** : ANALYTICAL TECHNIQUES IN FOOD QUALITY ASSURANCE  
**Course Code** : 16VF/VM /AT46  
**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. 14 – 20 2018 (Day Order 1 to 6)	Unit 1.1 – Principles of colorimetry Unit 1.2 - Estimation of iron	Ppt, lecture, practical	Pearson's Chemical Analysis of Foods. 9 <sup>th</sup> Ed. Longman Scientific & Technical. Leo ML. <i>Handbook of Food Analysis</i> . 2 <sup>nd</sup> Ed. Vols. I-III. 2004 Anjaneyuku. Y, Textbook of Analytical chemistry, 2006	Test, practical
Nov. 22 - 29, 2018 (Day Order 1 to 6)	Unit 1.1 – Principles of Spectrophotometry. Instrumentation of UV/Vis Spectrophotometer (block diagram) Unit 1.3 – Estimation of Vitamin A	Ppt, lecture, practical, demonstration	Anjaneyuku. Y, Textbook of Analytical chemistry, 2006 Pearson's Chemical Analysis of Foods. 9 <sup>th</sup> Ed. Longman Scientific & Technical. Leo ML. <i>Handbook of Food Analysis</i> . AOAC International. Official methods of analysis of AOAC International. 17 <sup>th</sup> Ed. 2013 2 <sup>nd</sup> Ed. Vols. I-III. 2004	Test, practical

Nov. 30 – Dec 06, 2018 (Day Order 1 to 6)	Unit 1.3 – Estimation of Cholesterol Unit 2.1 – Introduction, Principle, theory of chromatography	Ppt, lecture, practical, demonstration	Anjaneyuku. Y, Textbook of Analytical chemistry, 2006 Pearson's Chemical Analysis of Foods. 9 <sup>th</sup> Ed. Longman Scientific & Technical. Leo ML. <i>Handbook of Food Analysis</i> . 2 <sup>nd</sup> Ed. Vols. I-III. 2004 AOAC International. Official methods of analysis of AOAC International. 17 <sup>th</sup> Ed. 2013	Test, Assignment, presentation
Dec 07 - 14, 2018 (Day Order 1 to 6)	Unit 2.1 – Applications of Chromatographic techniques in food industry Unit 2.2 – Separation and identification of amino acids / sugars by paper chromatography	Ppt, lecture, practical, demonstration	do	Assignment
Dec. 15 - 21, 2018 (Day Order 1 to 6)	Unit 2.3 – Principle , instrumentation and applications of GC Unit 2.1 – Separation of carotenoids by Thin layer chromatography	Ppt, lecture, practical, demonstration	do	Assignment, presentation
Jan. 03 - 04, 2019 (Day Order 1 to 2)	Unit 2.3 – Principle, instrumentation and	Ppt, lecture, demonstration	Anjaneyuku. Y, Textbook of Analytical chemistry, 2006	Assignment, presentation

	applications of HPLC			
Jan. 05- 09, 2019 (Day Order 3 to 6)	Unit 3.1 – Principle and instrumentation of Flame photometry	Ppt, lecture,, demonstration	do	Assignment, presentation
Jan. 10- 21, 2019 (Day Order 1 to 6)	Unit 3.2 – Estimation of calcium, sodium and phosphorus by Flame photometry	Ppt, lecture, practical, demonstration	do AOAC International. Official methods of analysis of AOAC International. 17 <sup>th</sup> Ed. 2013	Practical
Jan. 22, 2019 (Day Order 1)	Unit 3.3 – Refractometry and Viscometry – Determination of refractive index using Abbe’s refractometer	Lecture, practical	do	Test, assignment
Jan.23 - 29, 2019	<b>C.A. Test</b>			
Jan.30 – Feb 05, 2019 (Day Order 2 to 6)	Unit 4.1 – Thermal methods in Food analysis	Lecture with ppt	Pearson's Chemical Analysis of Foods. 9 <sup>th</sup> Ed. Longman Scientific & Technical. Leo ML. <i>Handbook of Food Analysis</i> . 2 <sup>nd</sup> Ed. Vols. I- III. 2004	Assignment
Feb.06 - 13, 2019 (Day Order 1 to 6)	Unit 4.2 – Principle and instrumentation of Fluorimetry Unit 4.2 – Estimation of Thiamine / riboflavin	Ppt, lecture, practical, demonstration	do	Test
Feb.14 - 21, 2019 (Day Order 1 to 6)	Unit 4.3 – Determination of Moisture/ash/fibre content	Lecture, practical	Do Manual for Packaged Drinking Water	Quiz, assignment

	Unit 5.1 – Importance of water in food processing		Analysis by BIS, Govt. of India (2015)	
Feb.22 – Mar 01, 2019 (Day Order 1 to 6)	Unit 5.2 – Water quality monitoring – impact on food safety Unit 5.3 – Estimation of pH, TDS	Practical	do	Assignment
Mar 04 - 11, 2019 (Day Order 1 to 6)	Unit 5.3 – Determination of Turbidity, Dissolved Oxygen, BOD	Lecture, practical	do	Quiz, practical
Mar. 12 - 19, 2019 (Day Order 1 to 6)	Unit 5.3 – Estimation of COD.	Lecture, practical	do	Quiz, practical
Mar. 20 - 26, 2019 (Day Order 1 to 6)	Unit 5.3 – Hardness, Chloride content in water samples	Lecture, practical	do	Quiz, practical
Mar. 27 - 28, 2019 (Day Order 1 to 2)	<b>REVISION DAYS</b>			

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

**Course Schedule – November 2018 – April 2019**

**Department** : B.Voc Food Processing and Quality Control  
**Name/s of the Faculty** : Dr. J. Sonya  
**Course Title** : Food Laws and Food Safety  
**Course Code** : 16VF/VM/FF46  
**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>
November 14 – 20, 2018 (Day Order 1 to 6)	Unit 1: Food Safety and Quality Control 1.1 Concept and Meaning of food safety. 1.2 Safety Assessment of food contaminants and pesticide residues	PPT and Lecture	Muranno. Understanding Food Processing and Technology.	Test
November 22 – 29, 2018 (Day Order 1 to 6)	1.3 Concept of Quality: quality attributes – physical, chemical, nutritional, microbial and sensory. Importance and functions of quality control, Principles of quality control	PPT and Lecture	Do & Ranganna. S Handbook of Analysis and quality control for fruit and vegetable products	Assignment and Focused group Discussion
November 30 – December 6, 2018 (Day Order 1 to 6)	Unit 2 Food Laws 2.1 Prevention of food adulteration act, BIS act, FPO act, essential commodities act, consumer protection act, agricultural produce act (AGMARK) 2.2 Food Safety and Standards Act (FSSAI) 2006 – Domestic regulations	PPT and Demonstration	Gary .S. Tucker. Food Biodeterioration and Preservation & James .G. Brennan. Food Processing Handbook	Test
December 7 - 14, 2018 (Day Order 1 to 6)	2.3 Basic Prerequisites – GHPs GMPs, SSOPs, HACCP – concept and importance in food industry	PPT and seminar	do	Quiz - other component
December 15 - 21, 2018	Unit 3 Quality Assurance 3.1 Indian and	PPT	do Ranganna. S Handbook of Analysis and quality	Test

(Day Order 1 to 6)	international quality systems and standards like ISO, Food Codex.		control for fruit and vegetable products	
January 3 - 9, 2019 (Day Order 1 to 6)	3.2 Tips to consumers for buying safe food	PPT	Muranno. Understanding Food Processing and Technology & Ranganna. S Handbook of Analysis and quality control for fruit and vegetable products	Quiz
January 10 - 21, 2019 (Day Order 1 to 6)	3.3 TQM – concept and need for quality, components of TQM, Accreditation and Auditing, Managerial skills and budget management.	PPT and seminar	Muranno. Understanding Food Processing and Technology.	Quiz
January 22, 2019 (Day Order 1)	3.3 TQM – concept and need for quality, components of TQM, Accreditation and Auditing, Managerial skills and budget management.	PPT	do	discussion
January 23 - 29, 2019	CA Test			
January 30 – February 5, 2019 (Day Order 2 to 6)	Unit 4 Food Adulteration 4.1 Definition, causes and effects of adulteration 4.2 Detection of food adulteration – chicory and tamarind seed powder in coffee powder, non permitted colours in Tea and dhalsm, jams, jellies, juices.	Lecture, PPT and demonstration	Muranno. Understanding Food Processing and Technology & Meyer, Food chemistry.	Model Preparation
February 6 -13, 2019 (Day Order 1 to 6)	4.2 Metanil yellow in turmeric powder and kesari powder, argemone oil, mineral oil, castor oil in edible oils, papaya seeds and rotten pepper in pepper, brick powder in chilli powder, washing soda in jiggery, bura sugar, vanaspathi in ghee, chalk powder in salt and saccharin in supari	Lecture, PPT and demonstration	Muranno. Understanding Food Processing and Technology & Meyer, Food chemistry.	Model Preparation Other component

February 14 -21, 2019 (Day Order 1 to 6)	Unit 5: Food Additives 5.1 Definitions of food additives, classification and functions	Lecture and Miniature model	Muranno. Understanding Food Processing and Technology & Meyer, Food chemistry.	Test
February 22 – March 1, 2019 (Day Order 1 to 6)	5.2 Legitimate uses of Additives in foods, intentional and non intentional additives, indirect food additives	Lecture and Demonstration	Meyer, Food chemistry.	Assignment and test
March 4 -11, 2019 (Day Order 1 to 6)	5.3 Additives such as preservatives	PPT and Demonstration	Meyer, Food chemistry.	Test and Practical
March 12 -19, 2019 (Day Order 1 to 6)	5.3 Class I and Class II preservatives as per FSSAI	PPT and Lecture	Muranno. Understanding Food Processing and Technology & Meyer, Food chemistry.	Quiz
March 20 -26, 2019 (Day Order 1 – 6)	5.3 Additives such as preservatives (antioxidants, emulsifiers, sequesterants, humectants, stabilizers	PPT and Lecture	do.	test
March 27 -28, 2019 (Day Order 1 –2)	<b>REVISION DAYS</b>			



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

**Course Schedule – November 2018– April 2019**

**Department : B. Voc. Food Processing & Quality Control**

**Name/s of the Faculty : Ms. Deepika. K and R.Shantha**

**Course Title : FOOD PACKAGING**

**Course Code : 16VF/VE/FP45**

**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. 14 - 20, 2018 (Day Order 1 to 6)	Unit 1.1 – Definition, objectives and functions of packaging Unit 1.2 – Packaging requirements (K.Deepika)	Lecture	Norman. N. Potter. <i>Food Science</i> , New Delhi: CBS Publishers and Distributors, 2004	Assignment
Nov. 22 - 29, 2018 (Day Order 1 to 6)	Unit 1.1 packaging materials (R.Shantha) Unit 1.3 –Selection of packaging materials for different food types (K.Deepika)	Ppt, lecture,	Handbook of Food Packaging Technology, EIRI, 2014	Assignment, model or chart presentation
Nov30. – Dec 06, 2018 (Day Order 1 to 6)	Unit 2.1 – Paper: corrugated fiber board, flexible laminates(shantha); Glass containers, types of closures, Metals: Tin plate containers, Tin Free Steel (TFS)(Deepika)	Ppt, lecture, discussion	Handbook of Food Packaging Technology, EIRI, 2014	Assignment
Dec 03 -08, 2018 (Day Order 1 to 6)	Unit 2.1 –Types of Cans, Aluminum Containers (R.Shantha) Unit 2.2 – Plastics: types of plastic films, laminated plastic materials (K.Deepika)	Ppt, lecture, discussion	Mridula Saxena, Food Packaging, Handbook of Food Packaging Technology, EIRI, 2014	Assignment
Dec. 07- 14, 2018 (Day Order 1 to 6)	Unit 2.2 – Edible films, biodegradable plastics (R.Shantha) Unit 3.1 – Tensile strength, bursting strength (K.Deepika)	Ppt, lecture, discussion	Handbook of Food Packaging Technology, EIRI, 2014 Sood SK, Food Packaging	Quiz
Dec. 15 - 22, 2018 (Day Order 1 to 6)	Unit 3.1 – Tearing resistance, (R.Shantha) puncture resistance	Lecture	Norman. N. Potter. <i>Food Science</i> , New Delhi: CBS Publishers and Distributors, 2004	Puzzle

	(K.Deepika)			
Jan. 03- 09, 2019 (Day Order 1 to 6)	Unit 3.2 – Impact strength, tear strength; (K.Deepika) migration test (R.Shantha)	Lecture	Norman. N. Potter. <i>Food Science</i> , New Delhi: CBS Publishers and Distributors, 2004 Sood SK, Food Packaging	Test
Jan. 10 - 11, 2019 (Day Order 1 to 2)	Unit 3.3 – Prediction of Shelf life of foods, Shantha selection and design of packaging material for different foods .Deepika	Lecture, assignment	Norman. N. Potter. <i>Food Science</i> , New Delhi: CBS Publishers and Distributors, 2004	Test
Jan. 17- 21, 2019 (Day Order 3 to 6)	Unit 3.2 - Barrier properties – factors affecting permeability, Shantha permeability coefficient, gas transmission rate (GTR) Deepika	Lecture	Norman. N. Potter. <i>Food Science</i> , New Delhi: CBS Publishers and Distributors, 2004	Puzzle
Jan.23- 29, 2019	<b>C.A. Test</b>			
Jan 30 – Jan31,2019 (Day Order 2 to 3)	Unit 3.2 - GTR measurement,Shantha water vapour transmission rate (WVTR) and its measurement Deepika	Lecture	Norman. N. Potter. <i>Food Science</i> , New Delhi: CBS Publishers and Distributors, 2004	Puzzle
Feb.01- 05, 2019 (Day Order 4 to 6)	Unit 4.1 - Food packaging systems: Different forms of Packaging such as rigid, semi rigid, flexible forms (R.Shantha)	Ppt, demostration	Handbook of Food Packaging Technology, EIRI, 2014	Model making
Feb.06 - 13, 2019 (Day Order 1 to 6)	Unit 4.2 - Packaging system for dehydrated foods, frozen foods, (K.Deepika) dairy products, fresh fruits and vegetables (R.Shantha)	Discussion, lecture	Norman. N. Potter. <i>Food Science</i> , New Delhi: CBS Publishers and Distributors, 2004	Quiz, test
Feb.14 - 21, 2019 (Day Order 1 to 6)	Unit 4.3 - Packaging of Meat, Poultry and Sea Foods .Shantha and Deepika	Discussion, lecture	Norman. N. Potter. <i>Food Science</i> , New Delhi: CBS Publishers and Distributors, 2004	Discussion
Feb.22 – Mar 01, 2019 (Day Order 1 to 6)	Unit 5.1 - Packaging equipment and machinery- Vacuum,.Deepika CA and MA packaging machine; gas packaging machine Shantha	Discussion, lecture, demostration	Handbook of Food Packaging Technology, EIRI, 2014	Quiz

Mar. 04 - 11, 2019 (Day Order 1 to 6)	Unit 5.2 - Seal and shrink packaging machine; form and fill sealing machine; (R.Shantha) Aseptic packaging systems; bottling machines; carton making machines (K.Deepika)	Discussion, lecture	Handbook of Food Packaging Technology, EIRI, 2014	Assignment evaluation
Mar. 12- 19, 2019 (Day Order 1 to 6)	Unit 5.3 - Recent trends in Packaging-R.Shantha) Nano particles in food packaging K.Deepika	Lecture	Handbook of Food Packaging Technology, EIRI, 2014	Test
Mar. 20- 26, 2019 (Day Order 1 to 6)	Packaging material from plant sources- Shantha Nano particles in food packaging (K.Deepika)	Lecture	do	Test
Mar. 27 - 28, 2019 (Day Order 1 to 2)	<b>REVISION DAYS</b>			

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

**Course Schedule – November 2018 – April 2019**

**Department : B. Voc. Food Processing and Quality Control**

**Name/s of the Faculty : Ms. Deepika. K**

**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. 14 - 20, 2018 (Day Order 1 to 6)	<b>Unit 1.1</b> Definition, scope, significance and objectives of Food Quality Management	Lecture	Andres Vasconcellos J. 2015, Quality Assurance for food industry- a practical approach, CRC Press. Kher, C.P., Quality Control for food industry, ITC Publishers, Geneva 2000	Test
Nov. 22 - 29, 2018 (Day Order 1 to 6)	1.1 Dimensions of quality in foods, Evaluation techniques, Quality Control versus Quality Assurance	Lecture	Andres Vasconcellos J. 2015, Quality Assurance for food industry- a practical approach, CRC Press.	Discussions
Nov. 30 – Dec 06, 2018 (Day Order 1 to 6)	1.2 Quality assurance for raw material, in process and processed products, safe handling and hygiene requirements for personnel equipment	Powerpoint presentation	Luning, P.A. & Marcellis, W.J. (2009), Food Quality Management, technological and managerial principles and practices, Wageningen academic publishers	Quiz
Dec 07 - 14, 2018 (Day Order 1 to 6)	1.3 Safe handling and hygiene requirements for personnel and equipment 2.1 Tools to aid in Quality Management	Lecture with presentation	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Assignment
Dec. 15 - 21, 2018 (Day Order 1 to 6)	2.2 Quality audit and internal audit	Lecture with presentation	Andres Vasconcellos J. 2015, Quality Assurance for food industry- a practical approach, CRC Press.	Case study
Jan. 03- 09, 2019	2.3 Proficiency testing for product quality, six	Lecture	Andres Vasconcellos J. 2015, Quality	Test

(Day Order 1 to 6)	sigma concept, continuous upgradation and improvement of productivity	with presentation	Assurance for food industry- a practical approach, CRC Press.	
Jan. 10- 21, 2019 (Day Order 1 to 6)	<b>Unit 3</b> 3.1 HACCP - Principle, Implementation of HACCP for Jam, Bakery products, dairy products, Meat, fish and egg industries 3.2 Pre-requisite programmes – Good Manufacturing Practices	Presentation	Sara Mortimore and Carol Wallace, 2013 HACCP - A practical approach, 3rd edition, Chapman and Hall, London.	Case study analysis
Jan. 22, 2019 (Day Order 1)	3.2 Personal hygiene	Presentation	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Demonstration
Jan.23 - 29, 2019	<b>C.A. Test</b>			
Jan.30 – Feb 05, 2019 (Day Order 2 to 6)	3.2 Occupational health and safety specification, differences between PRP and OPRP, Traceability and accountability.	Presentation	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Test
Feb.06 - 13, 2019 (Day Order 1 to 6)	3.3 Food Plant sanitation management, exterior and interior maintenance, safety procedures during transportation, storage and scaling up	Lecture	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Test
Feb.14 - 21, 2019 (Day Order 1 to 6)	<b>Unit 4</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	Guest lectures	Sara Mortimore and Carol Wallace, 2013 HACCP - A practical approach, 3rd edition, Chapman and Hall, London.	Quiz

	commission - CAC			
Feb.22 – Mar. 01, 2019 (Day Order 1 to 6)	4.3 Export and Import regulation for food produce – raw and processed 4.4 Packaging and labeling regulations for different types of food	Lectures	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Assignment
Mar 04 -11, 2019 (Day Order 1 to 6)	<b>Unit 5</b> 5.1 Effluent treatment plant location, requirements and maintenance	Lecture	Roday, S. 1998 Food hygiene and Sanitation, Tata McGraw Hill education	Model-making
Mar. 12 - 19, 2019 (Day Order 1 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	Assignment
Mar. 20 - 26, 2019 (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	Assignment
Mar. 27 - 28, 2019 (Day Order 1 to 2)	<b>REVISION DAYS</b>			

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

**Course Schedule – November 2018 – April 2019**

**Department : B.Voc. Food Processing & Quality Control**

**Name/s of the Faculty : R. Shantha**

**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. 14 - 20, 2018 (Day Order 1 to 6)	<b>Unit 1</b> <b>1.1</b> Food Industry Wastes, Food Waste Treatment, necessity of food waste utilization	Lecture and PPT	Mariett, N.G. <i>Principles of food sanitation</i> , CBS publication, 2005 Yapjakis, C. L.Wang, Yung Tse- Hung, H. LO, <i>Waste treatment in the food processing industry</i> . CRC,2005	Test
Nov. 22 - 29, 2018 (Day Order 1 to 6)	1.2 Types of Waste and magnitude of waste generation in different Food Processing industries	Lecture and PPT	do	Test and case study
Nov. 30 – Dec 06, 2018 (Day Order 1 to 6)	1.3 Concept, Scope and Importance of Waste Management and Effluent Treatment	Lecture and PPT	do	Test
Dec 07 - 14, 2018 (Day Order 1 to 6)	Unit 2.1 ISO 14001 standards, Environmental Legislation 2.2 Treatment according to established standards and directives	Lecture and PPT	do	Open book test
Dec. 15 - 21, 2018 (Day Order 1 to 6)	2.2 Environmental best – practice technologies for Waste Minimization, Environmental Protection Act and specification for effluent of different Food Industries	Lecture and PPT	do	Assignment other component

Jan. 03- 09, 2019 (Day Order 1 to 6)	3.1 Treatment – Pre-treatment of waste: sedimentation, coagulation, flocculation and floatation 3.2 Secondary treatments: Biological oxidation –trickling filters, oxidation ditches, activated sludge process, rotating biological contractors, aerated lagoons	Lecture and PPT	Waldron, K <i>“Handbook of waste management and co-product recovery in food processing”</i> . CRC, 2007. Smith, R., J. Klemes, J-K Kim <i>“Handbook of water and energy management in food processing.”</i> , CRC, 2008.	Test
Jan. 10- 21, 2019 (Day Order 1 to 6)	3.3 Tertiary treatments 3.4 Testing – pH, BOD, COD, fat, oil and grease content, Metal content, Phosphorus and Sulphur in waste waters, Microbiology of wastes, Insecticides, Pesticides and Fungicides residues	Lecture and PPT	<b>do</b>	<b>Test</b>
Jan. 22, 2019 (Day Order 1)	Unit4.1 Characterization and utilization of by-products from Cereals, Pulses and oilseeds	Lecture and PPT	Oreopoulou, V. Russ, W (ed) <i>“Utilisation of by-products and treatment of waste in the food industry”</i> Vol, 3., Springer, 2007.	<b>Test</b>
Jan.23 - 29, 2019	<b>C.A. Test</b>			
Jan.30 – Feb 05, 2019 (Day Order 2 to 6)	Unit4.1 Characterization and utilization of by-products from Cereals, Pulses and oilseeds	Lecture and PPT	do	Mini project Other component
Feb.06 - 13, 2019 (Day Order 1 to 6)	4.2 Fruits and Vegetables and Plantation Crops	Lecture and PPT	do	Test
Feb.14 - 21, 2019 (Day Order 1 to 6)	4.3 Vermicomposting of Wastes from Food Industries	Lecture and PPT	Ismail S.A., <i>The Earthworm Book</i> , Goa: India, 2005	Quiz
Feb.22 – Mar. 01, 2019	4.3 Vermicomposting of Wastes from Food	Lecture and PPT	Ismail S.A., <i>The Earthworm Book</i> , Goa: India, 2005	Quiz



(Day Order 1 to 6)	Industries			
Mar 04 -11, 2019 (Day Order 1 to 6)	Unit 5.1 Characterization and utilization of by- products from dairy industries	Lecture and PPT	Oreopoulou, V. Russ, W (ed) <i>“Utilisation of by-products and treatment of waste in the food industry”</i> Vol, 3., Springer, 2007.	Quiz
Mar. 12 - 19, 2019 (Day Order 1 to 6)	5.2 Utilization of wastes from poultry, Meat,	Lecture and PPT	do	Test
Mar. 20 - 26, 2019 (Day Order 1 to 6)	5.2 Fish and Marine Processing Industries	Lecture and PPT	do	Test
Mar. 27 - 28, 2019 (Day Order 1 to 2)	REVISION DAYS			

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

**Course Schedule – November 2018 – April 2019**

**Department** : B.Voc Food Processing and Quality Control  
**Name/s of the Faculty** : Dr. J. Sonya & Dr. M. Anbu malar  
**Course Title** : Emerging trends in Food Processing and Technology  
**Course Code** : 16VF/VM/PT66  
**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>
November 14 – 20, 2018 (Day Order 1 to 6)	Unit 1: Minimal Processing 1.1 Minimal fresh processing of vegetables, fruits and juices. 1.2 Minimal Processing of ready meals	PPT and Lecture	Food Processing Handbook Edited by James .G. Brennan	Test
November 22 – 29, 2018 (Day Order 1 to 6)	1.3 Modified atmosphere packaging for minimally processed foods	PPT and Lecture	Food Processing Handbook Edited by James .G. Brennan	Assignment and Focused group Discussion
November 30 – December 6, 2018 (Day Order 1 to 6)	Unit 2 Pulsed Electric Fields Processing 2.1 Overview of Pulsed electric field processing for food. 2.2 Pulsed electric field processing of liquid foods and beverages.	PPT and Demonstration	Food Biodeterioration and Preservation Edited by Gary .S. Tucker & Food Processing Handbook Edited by James .G. Brennan	Test
December 7 - 14, 2018 (Day Order 1 to 6)	2.3 Effect of High Intensity Electric Field Pulses on solid foods 2.4 Enzymatic Inactivation of Pulsed electric field	PPT and Demonstration	Food Biodeterioration and Preservation Edited by Gary .S. Tucker & Food Processing Handbook Edited by James .G. Brennan	Test

December 15 - 21, 2018 (Day Order 1 to 6)	2.5 Food Safety Aspects of Pulsed Electric Fields	PPT and Demonstration	Food Processing Handbook Edited by James .G. Brennan	Test
January 3 - 9, 2019 (Day Order 1 to 6)	Unit 3 Food Irradiation and High Pressure Processing 3.1 Food Irradiation – advantages and applications, microwave processing – interaction with food materials 3.2 High Pressure processing of foods: An Overview – principles - equipment	PPT and Demonstration	Understanding Food Processing and Technology by Muranno	Other component Quiz
January 10 - 11, 2019 (Day Order 1 to 2)	3.3 Microbiological aspects of High – Pressure Processing	PPT and Demonstration	Understanding Food Processing and Technology by Muranno	Test
January 17 - 22, 2019 (Day Order 3 - 6 & 1)	3.3 Microbiological aspects of High – Pressure Processing	PPT and Demonstration	do	test
January 23 - 29, 2019	CA Test			
January 30 – February 5, 2019 (Day Order 2 to 6)	Unit 4 Ohmic Heating 4.1 Application of heat and ultrasound – inactivation of microorganisms and enzymes	Lecture, PPT and demonstration	Food Processing Handbook Edited by James .G. Brennan	Test

	4.2 Electrical resistance heating of food – ohmic heating models – treatment of products – high voltage pulse techniques – elsteril process, influence on microorganism, food ingredients			
February 6 -13, 2019 (Day Order 1 to 6)	4.3 Decontamination of packaging – decontamination of microorganism by surface treatment	Lecture, PPT and demonstration	Understanding Food Processing and Technology by Muranno	Test and Other component
February 14 -21, 2019 (Day Order 1 to 6)	Unit 5: Innovation in food Refrigeration 5.1 Vacuum cooling of foods	Lecture	do	Test
February 22 – March 1, 2019 (Day Order 1 to 6)	5.2 Ultrasonic Assistance of food freezing	Lecture and Demo	Food Processing Handbook Edited by James .G. Brennan	Assignment and test
March 4 -11, 2019 (Day Order 1 to 6)	5.3 High pressure freezing	PPT and Demo	do	Test and Practical
March 12 -19, 2019 (Day Order 1 to 6)	5.4 Controlling the freezing process with Antifreeze Proteins	PPT and Lecture	do	Quiz
Mar. 20 - 26, 2019 (Day Order 1 to 6)	5.4 Controlling the freezing process with Antifreeze Proteins	Lecture	do	Test
Mar. 27 - 28, 2019 (Day Order 1 to 2)	REVISION DAYS			