**M.Tech.- Food Technology**

**PROGRAM OUTCOMES (POs)**

**PO1:** An ability to independently carry out research /investigation and development work to solve practical problems

**PO2:** An ability to write and present a substantial technical report/document

**PO3:** Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program

**PROGRAM SPECIFIC OUTCOMES (PSOs)**

**PSO1:** Post-Graduates will be able to implement the knowledge of Food Microbiology, Food Chemistry, Food Engineering, Food Safety and Quality control for Food Processing, Packaging & Preservations to meet societal needs and global food security challenges.

**PSO2:** Post graduates will be able to bridge the gap between the real-time needs from industries and academics with practical exposure from various co-curricular activities.

**COURSE OUTCOMES (COS)**

**Batch; 2018-2022**

| Semester | Course Code | Course Name | Course Outcomes |
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| | | | (Cos) |
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| 1 | 18MTFT101 | Advanced Food Chemistry | CO 1: To name and describe the general chemical structures of the major and minor components of foods |
| | | | CO 2: To give a molecular rationalization for the observed physical properties and reactivity of major food components. |
| | | | CO3: To predict how processing of pigments and colors in food industry |
| 1 | 18MTFT102 | Industrial Food Microbiology | CO 1: Interpret the attributes of microorganisms and their interaction in food system |
| | | | CO 2: Criticize the rapid and conventional techniques to detect food borne pathogens and toxins |
| | | | Determines biological hazards by making use of HACCP and predictive modeling |
| | | | CO 3: Criticize the problems and issues concerning beneficial and harmful microorganisms in foods. |
| 1 | 18MTFT131 | Applied Nutritional Biochemistry | CO 1: Calculate the energy requirement and energy values of foods |
| | | | CO 2: Recall the sources of nutrients and its deficiency diseases. |
| | | | CO 3: Discuss the significance of vitamins and dietary fibers and its deficiency diseases. |

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| 1 | 18MTFT132 | Functional foods and Nutraceuticals | CO 1: Describe about various components of Nutraceutical components and their properties. |
| | | | CO 2: Comment and explain on the health benefits of functional food claims and research activities in the field. |
| | | | CO 3: Recall the effect of processing in nutraceutical components. |
| 1 | 18MTFT133 | Aromatic and Medicinal Plants | CO 1: Students have an idea on the importance of medicinal and aromatic plants in different cultures, and their historical uses. |
| | | | CO 2: Able to categorize medicinal and aromatic plants according to different systems, which enable them to know better these species and their role in human and animal health |
| | | | CO 3: Knowledge on methods of medicinal and aromatic plants preparations, formulations for marketing and healing properties |
| 1 | 18MTF141 | Food Packaging Technology | CO 1: Identify the packaging materials used for various food application |
| | | | CO 2: Understand the different changes takes place based on food packaging materials |
| | | | CO 3: To select the packaging system for shelf life extension of food. |

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| 1 | 18MTFT142 | Food Storage and Infestation Control | CO 1: Interpret the different types of coolers, warehouses and contrasts on small and large commercial storages |
| | | | CO 2: Criticize the reason behind rate of freezing and its effect on texture and quality of foods |
| | | | CO 3: Predict the changes occurring in grains during storage |
| | | | CO 4: Organize the pest control methods for various foods |
| 1 | 18MTFT143 | Sanitation &Waste Management in Food Industries | CO 1: Explain principle behind hygiene and sanitization practices |
| | | | CO 2: Identify the method to be selected for sanitization operations |
| | | | CO 3: Classify and compare waste management systems. |
| 2 | 18MTFT201 | Food Process Engineering | CO 1: Know the machines/equipment used for the different Module operations in food processing |
| | | | CO 2: Identify the effect of module operations on food components |
| | | | CO 3: Distinguish the effect of each operation on Microorganisms and organic materials. |
| 2 | 18MTFT202 | Food Safety and Quality Control | CO 1: Acquires basic understanding of quality concepts and practice in food companies |
| | | | CO 2: Able to comment on safety standards and specifications for a food processing industry |
| | | | CO 3: Able to design |

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| | | | food analysis laboratory and understood the working and principle of analytical instruments |
| 2 | 18MTFT231 | Grain Processing and Baking Technology | CO 1: Recall the knowledge and principles of cereals and their production processes. |
| | | | CO 2: Recognize the functionality of wet and dry milling process. |
| | | | CO 3: Comprehend on the properties and reactions of baking process. |
| | | | CO 4: Criticize the quality of finished products in terms of raw materials used and the Module operations adopted. |
| 2 | 18MTFT232 | Enzyme and Fermentation Technology | CO 1: Recall the fundamentals of enzyme properties, nomenclatures, characteristics and their mechanisms |
| | | | CO 2: Select the appropriate enzymes for food applications |
| | | | CO 3: Predict the efficiency of enzyme reaction |
| | | | CO 4: Explain the technology behind fermenter or bioreactors |
| 2 | 18MTFT234 | Oil and Fat Technology | CO 1: Identify the physical, chemical properties and sources of fats and oils |
| | | | CO 2: Understand the methodology behind the fats and oils processing |
| | | | CO 3: Comment on the effective utilization of fats and oils in various |

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| | | | foods |
| 2 | 18MTFT241 | Dairy Technology | CO 1: Distinguish between factors affecting milk composition and nutritive value of milk |
| | | | CO 2: Identify appropriate processing steps for milk |
| | | | CO 3: Evaluate the quality of various dairy based products |
| 2 | 18MTFT242 | Fruit and Vegetable Technology | CO 1: Explain the production rate and constraints on production of fruits and vegetables in India |
| | | | CO 2: Comment on the theory and working principle behind production steps behind various products from fruits and vegetables |
| | | | CO 3: Recall the technology behind effective storage of fruits and vegetables |
| 2 | 18MTFT243 | Meat and Poultry Technology | CO 1: Determine the quality of meat and meat products |
| | | | CO 2: Assess the process behind marine food processing |
| | | | CO 3: Relate the health benefits and production procedures in poultry foods |
| 3 | 18MTFT311 | Water and Beverage Technology | CO 1: Predict the types of water in food systems and their significance |
| | | | CO 2: Comment on the contaminants found water from microbial and chemical sources. |
| | | | CO 3: Outline the role of water and their impact in beverages |
| 3 | 18MTFT312 | Plantation Products, | CO 1: Able to apply |

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| | | Spices and Flavour Technology | knowledge for cultivation and commercialization of plantation crops and spices |
| | | | CO 2: Recall the technology behind flavor extraction |
| | | | CO 3: Understands the flavor profiling, processing techniques, quality aspects of flavor |
| 3 | 18MTFT313 | Food Law and Legislation | CO 1: Able to apply food laws and regulations in industries/ organization. |
| | | | CO 2: Evaluate the challenges and opportunities in the international food trade and harmonization of food laws |
| | | | CO 3: Compare international and domestic food laws and regulations |