Curriculum

Department	Food Processing and Engineering
Programme / Semester	M.Voc \ II Semester
Course	Value Added Course
Course Title	HACCP Implementation in Food Industry
Course Code	MVB020
Scheme	LTP: 2:0:0 30 Hours Lecture
Exam Pattern	C1:10, C2:10, C3 : 30

Unit 1: Introduction to HACCP and Food Safety

Hours: 6

Overview of Food Safety - Importance, global challenges, key concepts
Principles of HACCP - History, significance, basic principles
Food Safety Hazards - Biological, chemical, physical hazards, allergen management
Legislation and Standards - International standards (ISO 22000, Codex Alimentarius), national regulations
HACCP Models and Frameworks - Comparison and benefits of different models

Unit 2: Planning and Designing a HACCP System

Hours: 8

Pre-requisite Programs (PRPs) - GMP, GHP
Conducting Hazard Analysis - Identifying potential hazards, risk assessment
Critical Control Points (CCPs) - Identifying CCPs, determining critical limits
HACCP Plan Documentation - Creating HACCP plans, policies, procedures, record-keeping
Roles and Responsibilities - Management, staff roles, training

Unit 3: Implementing and Monitoring HACCP

Hours: 8

Implementation Strategies - Steps to implement HACCP, integration with other systems
Monitoring CCPs - Techniques, tools, KPIs
Internal Audits and Inspections - Conducting audits, preparing for inspections
Verification and Validation - Methods, continuous improvement
Crisis Management - Plans, product recalls

Unit 4: Continuous Improvement and Sustainability in HACCP

Hours: 8

Continuous Improvement - PDCA cycle, corrective actions
Sustainable Practices - Environmental impact, sustainable sourcing
Emerging Trends and Technologies - Advances in food safety technology, traceability
Stakeholder Engagement - Communication, building a food safety culture
Case Studies - Successful HACCP implementations, lessons learned

Reference Books
1.   Food Safety Management Systems: A Comprehensive Approach   by Dr. Saurabh Saran
2.   Food Safety and HACCP Implementation in the Indian Context   by Dr. D. S. Malik
3.   Practical Guide to HACCP Implementation in Indian Food Industry   by Dr. S. K. Singh
4.   HACCP: A Practical Handbook for Indian Food Businesses   by Dr. R. K. Saxena
5.   Food Safety and Quality Assurance: Principles and Practices for Indian Food Industry   by Dr. A. K. Sharma