ABOUT THE COURSE

COURSE NAME:	**FOOD ANALYSIS, PROCESSING AND PRESERVATION**
TOTAL DURATION:	45 Hrs
MODE OF DELIVERY	PHYSICAL CLASSROOM TRAINING AT RESPECTIVE COLLEGES
TRAINER TO STUDENT RATIO:	1:50
TOTAL MARKS:	75

TABLE 1	
OVERALL COURSE OBJECTIVE:	To equip participants with comprehensive knowledge and skills in food analysis techniques, covering various aspects of food composition, safety, and quality assessment.
LEARNING OUTCOME:	By the end of the course, participants will be able to: ● Apply the principles of food analysis methodologies. ● Exploring various techniques for food composition analysis. ● Evaluate food safety and quality parameters using analytical methods. ● Work on nutritional content and its analysis in food ● Interpret and report food analysis results accurately. ● Demonstrate proficiency in laboratory skills relevant to food analysis. ● Evaluating chemical composition and sensory attributes of food

TABLE 2: MODULE WISE COURSE CONTENT AND OUTCOME				
SL.NO	**MODULE NAME**	**MODULE CONTENT**	**MODULE LEARNING OUTCOME**	**DURATION (HRS)**
1	Introduction	Basics of food	Apply the principles and	9

	to Food Analysis	composition and analysis	importance of food analysis methodologies	
		Analytical techniques overview	Exploring various analytical techniques used in food analysis	
2	Food Composition Analysis	Proximate analysis	Applying techniques to determine the proximate composition of food	9
		Nutritional analysis	Work on nutritional content and its analysis in food	
3	Food Safety and Quality Assessment	Microbiological analysis	Applying methods to assess microbiological safety in food	10
		Chemical and sensory analysis	Evaluating chemical composition and sensory attributes of food	
4	Interpretation and Reporting of Analysis Results	Statistical analysis	Interpreting analytical results using statistical tools	8
		Report writing and presentation	Communicating analysis findings effectively through reports and presentations	
5	Laboratory Skills for Food Analysis	Equipment handling and maintenance	Developing proficiency in using laboratory equipment and maintaining accuracy in analysis	9
		Quality control procedures	Implementing quality control measures in the laboratory for accurate and reliable results	

TABLE 3: OVERALL COURSE LEARNING OUTCOME ASSESSMENT CRITERIA AND USECASES		
LEARNING OUTCOME	**ASSESSMENT CRITERIA**	**USECASES**

principles of food analysis methodologies	Quiz assessments	Multiple-choice or short-answer quizzes evaluating of food analysis methodologies
	Case study analysis	Analyzing practical scenarios demonstrating principles of food analysis methodologies
Applying various techniques for food composition analysis	Laboratory practical assessments	Performing various food composition analyses in a controlled laboratory setting
	Assignments on analytical methods	Demonstrating through assignments involving different analytical methods
Evaluating food safety and quality parameters	Evaluation of mock samples	Assessing the safety and quality of mock food samples using established analytical techniques
	Case-based assessments	Solving case studies related to food safety and quality assessment, applying analytical methods
Demonstrating proficiency in laboratory skills relevant to food analysis	Laboratory skill assessments	Performing tasks demonstrating proficiency in handling laboratory equipment and executing analysis accurately
	Quality control checks	Implementing quality control measures to ensure accuracy and precision in laboratory analysis

TABLE 4: LIST OF FINAL PROJECTS	
SL.NO	**FINAL PROJECT**
1	Development of a comprehensive food analysis handbook for various food categories
2	Case study analysis on the application of different analytical techniques in food analysis
3	Implementation of quality control measures in a mock food production scenario
4	Research project on emerging analytical methods in food analysis and their efficacy
5	Creation of a nutritional guide with analyzed data for diverse food products
6	Presentation on modern trends and innovations in food analysis techniques
7	Analysis of food safety and quality parameters using real food samples
8	Statistical analysis of food composition data and interpretation of results
9	Development of a report on food analysis findings and recommendations
10	Case-based assignments demonstrating various food analysis techniques
11	Proposal for implementing quality assurance measures in a food production setting
12	Simulation of practical exercises for food composition analysis
13	Research paper on the significance of sensory analysis in food quality assessment
14	Presentation on the impact of technological advancements in food analysis
15	Business strategy development for a food analysis laboratory
16	Case studies showcasing challenges and solutions in food analysis applications
17	Design and execution of a quality control program for food analysis
18	Financial plan outlining investment strategies for enhancing food analysis techniques
19	Project evaluating the feasibility of integrating sustainable practices in food analysis
20	Creation of a comprehensive report on advancements and challenges in food analysis