



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Bachelor of Vocation

Level: Under Graduate

Branch: Food Processing and Quality Control

Subject Code: BV04009081

Subject Name: Assistant Lab Technician

w. e. f. Academic Year:	2025-26
Semester:	4
Category of the Course:	On Job Training (OJT)

<b>Prerequisite:</b>	NA
<b>Rationale:</b>	This course is designed to train students in ensuring the quality and safety of food products through systematic laboratory testing and analysis. It focuses on sampling raw materials, packaging materials, finished products, and shelf-life samples to assess compliance with standards. Students will learn to prepare and maintain the food testing laboratory, operate equipment effectively, and perform both qualitative and quantitative analyses.

### Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	Ensure quality products through sampling of raw materials, packaging materials, finished products and shelf-life samples.	Remember
02	Prepare and maintain work area and equipment for food lab testing.	Understand
03	Maintain food safety and hygiene for food lab activities, maintain food safety and hygiene for food lab activities.	Apply
04	Perform quantitative and qualitative quality analysis.	Analyze

### Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Tutorial / Practical		
				ESE (E)	PA/CA (M)	PA/CA (I)	ESE (V)	
0	0	12	6	0	0	100	100	200



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## Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	<b>Prepare and maintain work area and Equipment for Food Lab Testing</b> <ul style="list-style-type: none"><li>• Ensure that the work area is safe and hygienic for food analysis</li><li>• Check the working and performance of all machineries and tools used for the pickle making process such as weighing scales, pH meter, moisture analyzer, oven, water bath, sterilizer, sieve shaker, refractometer, TDS (total dissolved solvents) meter, equipment for testing food products etc.</li><li>• Attend the minor repairs/ faults of all machines, if required</li></ul>	30	15
2.	<b>Prepare for Quality Analysis and Manage Housekeeping for Food Lab Activities</b> <ul style="list-style-type: none"><li>• Read and understand the production order from the food lab technician.</li><li>• Calibrate equipments like weighing scale, measuring jars, pH meter etc. on daily basis</li><li>• Maintain records on all documents related to the housekeeping activity</li></ul>	40	20
3.	<b>Sampling and Quality Analysis for Food Lab Activities</b> <ul style="list-style-type: none"><li>• Read and understand the sampling instructions from the food lab technician</li><li>• Sample the finished product(s) from the production storage area/warehouse</li><li>• Perform tests on packaging material like measuring dimensions of all packaging materials, checking the printed matter and comparing with standard, checking strength of cartons</li></ul>	40	25



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4.	<b>Complete documentation and record keeping related to performing Food Lab Activities</b> <ul style="list-style-type: none"><li>Maintaining records of observations related to raw materials, packaging materials</li><li>Recording quality assessments and batch details</li><li>Utilizing ERP systems for documentation and traceability</li></ul>	40	20
5.	<b>Food Safety, Hygiene, and Sanitation for food Lab Testing</b> <ul style="list-style-type: none"><li>Implementing GMP and HACCP standards</li><li>Managing allergens and preventing contamination</li><li>Label raw materials and finished products and store them in different storage areas according to safe food practices</li></ul>	30	20
<b>Total</b>		<b>180</b>	<b>100</b>

## Suggested Specification Table with Marks (OJT):

Distribution of OJT Marks					
R Level	U Level	A Level	N Level	E Level	C Level
30	30	30	10	-	-

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

## References/Suggested Learning Resources:

Assistant Lab Technician-Food and Agricultural Commodities FIC/Q7601, v1.0

## Open-source software and website:

- FSSAI (Food Safety and Standards Authority of India)** - <https://fssai.gov.in/> Provides guidelines on food safety practices, documentation, and maintenance in the dairy industry.
- FSSAI Guidelines:** Food safety and standards for processing fruits and vegetables.
- FAO Resources:** International best practices for drying and dehydration.



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4. **GHP and GMP Manuals:** Practical applications in food processing.
5. **Open-Source ERP Tools:** Documentation and tracking for production processes.
6. **Food and Agriculture Organization (FAO)** - <http://www.fao.org/home/en/> Offers international best practices on food safety, sanitation, and dairy processing.
7. **LibreOffice Calc** - <https://www.libreoffice.org/> Useful for record-keeping, documentation, and production parameter tracking in dairy operations.

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