

INNOVATIONS BY THE FACULTY IN TEACHING & LEARNING



Project-Based Learning

Reflection

Flipped Class



Active Learning

**ICT Enabled Teaching
and Learning**

Tech - Charades

Collaborative Learning

**Seminars and group
discussions**

Competitive exams



**Guest Lectures and
Workshops**

**Audio-Embedded –
PowerPoint presentation**

**Industrial interactions
and surveys with experts**

**Integrated practical
demonstration classes**

You Tube channel



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TKM Institute of Technology - Kollam

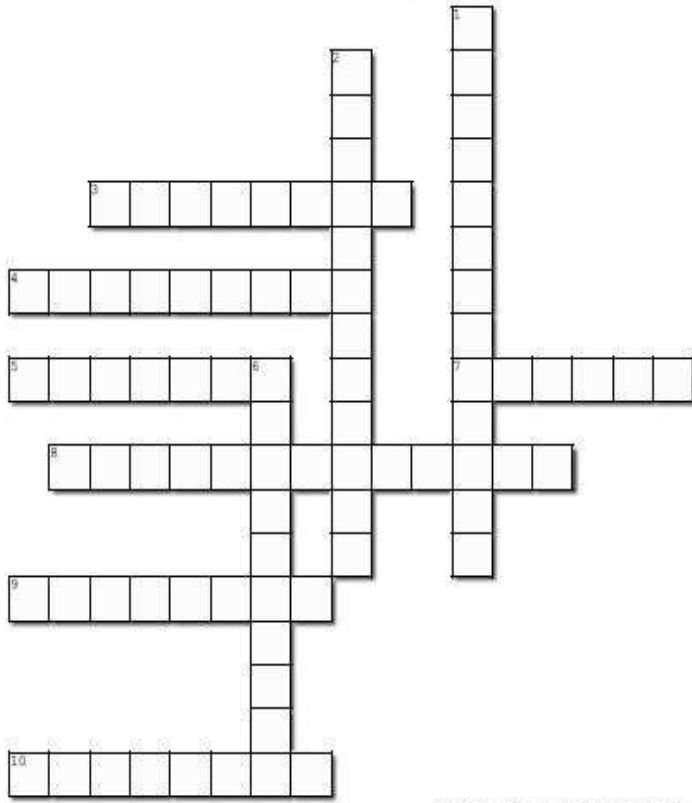


Seminars and group discussions

- Faculty members encourage Group discussion in the class for effective learning.
- Seminars and group discussions are conducted in classrooms with the notion of improving students' soft skills



Complete the crossword puzzle below



Created using the Crossword Maker on TheTeachersCorner.net

Across

3. Maker enzyme in blanching
4. is a condiment made from fish coated in salt (1:3) and fermented from weeks to up to two years
5. fleshy sides of the fish, cut lengthwise from the fish along the backbone.
7. a minced meat paste made from fish
8. Gas used in fish stunning
9. Type of meal having highest protein level
10. is the process of preserving the fish by either fermentation in brine or immersion in vinegar

Down

1. Enzymatic action causing perforation of the belly
2. Removal of visceral organs
6. science of safeguarding health

Active Learning

Active learning techniques is practiced through problem-solving exercises, case studies, role-playing, and debates.



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Collaborative Learning

- This approach promotes teamwork and communication skills, as well as fostering a sense of community within the classroom.
- The key benefit of collaborative learning is that it provides students with the opportunity to learn from their peers.

Quiz 3

Name and Roll no _____

Set A

1. The particles produced after _____ are irregular in shape and size.
2. In a good shearing unit, the _____ is usually thick enough to overcome the shock resulting from material hitting.
3. The ratio of the surface energy created by crushing to the energy absorbed by the solid is called _____.
4. Speed of crushing in a gyratory crusher range between _____ gyrations per minute.
5. Mathematically, Rittinger's law can be expressed as _____.



Industry Interaction and surveys with experts

- Live online/offline interactions with technical experts and Alumni are arranged which exposes the students to a plethora of available options after their graduation.
- This helps them to shape their career at an early stage and work towards their goal. It also creates a bond between the students of the institution.



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Industry Interaction and surveys with experts

INDUSTRIAL VISIT AT YAKULT DANONE

ACTIVE DISCUSSION BETWEEN PERSONNEL AND STUDENTS

Student 1:

Could you explain the production process of Yakult at this facility?

Yakult Personnel:

The production process of Yakult begins with the preparation of the skimmed milk, which is then sterilized at high temperatures to eliminate any harmful bacteria. After sterilization, the milk is cooled to a suitable temperature, and the unique strain of probiotics, *Lactobacillus casei* Shirota, is added. The mixture is then fermented for several hours, during which the probiotics multiply and the milk develops its characteristic taste. Once fermentation is complete, the product is mixed with a glucose-fructose syrup and water to achieve the desired flavor and consistency. Finally, Yakult is packaged in our iconic small bottles under aseptic conditions to ensure the highest hygiene standards.

INDUSTRIAL VISIT AT MILMA TRIVANDRUM

ACTIVE DISCUSSION BETWEEN PERSONNEL AND STUDENTS

Student 1:

What are the key steps involved in the milk processing at Milma?

Milma Personnel:

The milk processing at Milma involves several critical steps. First, the raw milk is collected from various dairy farms and transported to the plant. Upon arrival, the milk undergoes quality checks for parameters like fat content, microbial load, and adulterants. The milk is then pasteurized to eliminate harmful bacteria without affecting the nutritional value. After pasteurization, it is homogenized to ensure even fat distribution. Finally, the milk is packaged in sterile conditions and stored at the required temperature before being distributed.



Assignment Question	1
Cognitive Level	3
CO Mapped	3

Project-Based Learning

Project-based learning (PBL) is a teaching method that engages students in complex, real-world problems and encourages them to develop critical thinking, problem-solving, collaboration, and communication skills.

Method Adopted: Micro project

Group No.	Group Members	Topic
1	1.Adithya T S 2.Afnan Kabeer 3.Anupama V 4.Chandana M 5.Nandharaj T V 6.Sneha A S	Space Foods
2	1.Bilal 2.Amal N Mohammad 3.Alvin D James 4.Mohammad Afkhab 5.Mohammed Akbar Khan 6.Mohammed Sajad	Foxtail Millet Juice
3	1.Surya Jhega 2.Alvin Lopez Lopez 3.Mikhsana Shaji 4.Meera S Kumar 5.Fachima Noorin 6.Ashmi Jose	Oat Meal Honey Balls
4	1.Jibin Biju 2.Jerin Shaji 3.Sreelakshmi 4.Cerin Sara Mathew 5.Sarah Stanley 6.Gouri S	Sprouted Ragi Cake
5	1.Mohammed Sahal 2.Fouzan Mohammed	Wheat Noodles



Project-Based Learning

	3.Yousuf Mohammed Kuppi Umapex 4.Farook N 5.Sanjay Patel 6.Thomas Tom	
6	1.Rimi Rajeev 2.Najiya Yasmin 3.Devanandhana 4.R Al Shifa 5.Hafsaath Beeri 6.Kamal Sathosh	Multigrain Drink Mix
7	1.Shabana Kary 2.Aysha Rasheed 3.Salma A 4.Thehria V S 5.Salwa Salimsha 6.Nehla Alikutty	Millet Based Brownie
8	1.Hana Shereen 2.Jancy Varghese 3.Anjana K 4.Vrindha T 5.Jiya Joy 6.Nikhil Krishna	Cereal Based Toddler Foods
9	1.Jishi Noora 2.Arya S 3.Aipha Jabeen 4.Prakrishi S Pradeep 5.S Akshath 6.Abinoam Biju	Foxtail Millet Biryani
10	1.Ayisha N 2.Arunima Vinod 3.Agnes Job 4.Adhil N 5.Khanich Biju 6.Jibin Thankachen 7.Arshulya S	Millet based Popcorn

Evaluation Sheet

Parameters	Max.Marks	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
Preliminary presentation	2										
Unit operations involved	3										
Novelty of product	3										
Consumer acceptance	2										
Report	5										
Remarks											
Total	15										



Industrial Interactions and Workshops



Mr. Sivaraman interacting with students and faculty members



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Guest Lectures and Workshops



Thangal Kunju Musaliar
Institute of Technology
Department of Food Technology

FODEMY

WEBINAR ON
**CAREER PROSPECTS IN
FOOD TECHNOLOGY
THROUGH GATE EXAM**

SMRITI CHATURVEDI
PhD - ICT Mumbai

NEHA MAHTO
M.Tech - NIFTM-K

PARINDER KAUR
PhD - ICT Mumbai

SHABARI SREENIVAS
M.Tech - NIFTM-K

WEDNESDAY | 14 JUNE | 03:00 PM

<https://meet.google.com/jfm-hjq-rdx>



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Competitive exams (GATE QUALIFIED STUDENTS)

Sl. No	Academic year	Name of the student
1	2019 - 2020	Abhijith KV, Rekha R, Sreelakshmi VP Sreerag PP
2	2020-2021	Abhiraman H, Jibiya Johnson
3	2021-2022	Sonu S Shibhu Pooja Srivendhya Abhirami K Neethu Anil
4	2022-23	Diya Janaki
5	2023-24	Lekshmi Sudha Madhu Likhita Roy Pillai Pooja Prasad



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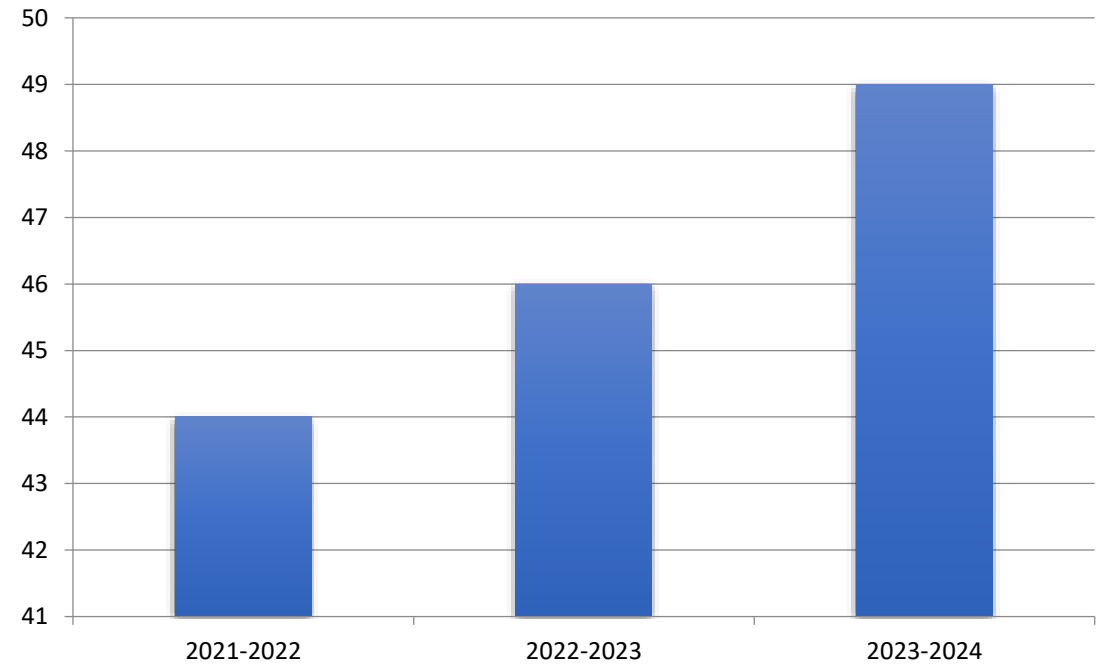


Massive open online courses (MOOCs)

Students qualified NPTEL Courses

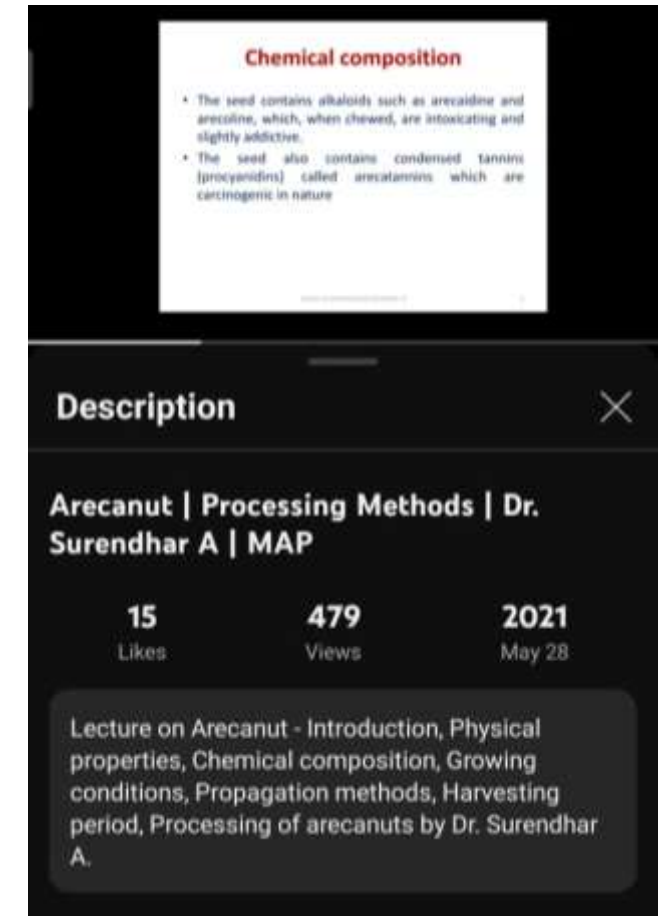
Academic year	No. of students qualified NPTEL
2021-2022	44
2022-2023	46
2023-2024	49

No. of students qualified NPTEL



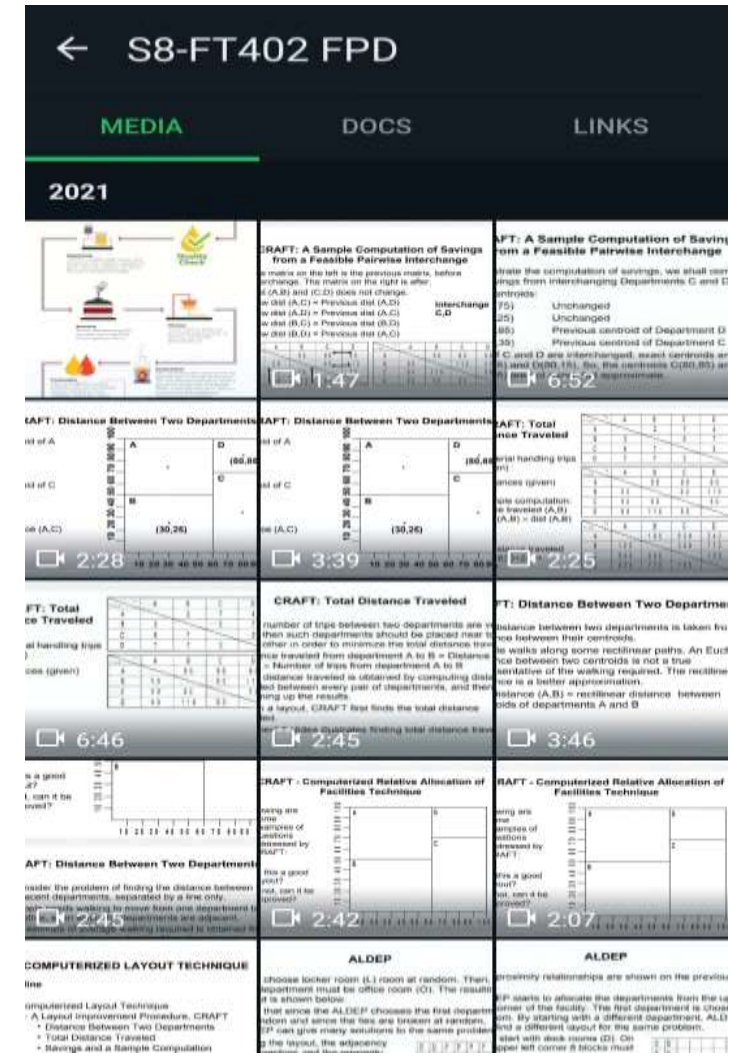
You Tube channel

- YouTube serves as an excellent platform for delivering lectures on Food Technology, making complex concepts in this field more accessible and engaging.
- Through video content, educators can visually demonstrate food processing techniques, explore the science behind food safety, and showcase the latest advancements in food technology.



Audio-Embedded –PowerPoint presentation

- An Audio-Embedded PowerPoint Presentation is an effective teaching method, particularly in the field of Food Technology. This approach allows educators to combine visual content with detailed audio explanations, making complex topics like food processing, safety protocols, and technological innovations easier to understand.





Reflection

- Reflection is an essential component of the assessment process in PBL.
- Students are encouraged to reflect on their learning experiences, challenges encountered, and growth throughout the project.
- Reflection can take various forms, such as journal entries, discussions, or multimedia presentations.



Tech - Charades



- Tech-Charades is an innovative and interactive teaching method that merges the traditional game of charades with technological concepts, making learning fun and engaging.
- In the context of Food Technology, Tech-Charades can be used to reinforce key terms, processes, and tools by having students act out these concepts without using words, while their peers guess what is being demonstrated.



Integrated practical demonstration classes



- It is essential component of education, especially in fields like Food Technology where hands-on experience is crucial.
- These classes involve live demonstrations of techniques, processes, and equipment operation, allowing students to observe and learn in a real-world context.
- By witnessing the application of theoretical knowledge in practical settings, students gain a deeper understanding of the subject matter and can better grasp complex concepts.





Flipped Class

- In a flipped classroom, students engage with instructional content outside of class, typically through watching pre-recorded lectures, reading materials, or multimedia resources at home.
- Class time is then utilized for active learning activities, such as discussions, problem-solving, group activities, and hands-on activities.

