



SANT LONGOWAL INSTITUTE OF
ENGINEERING & TECHNOLOGY



NEWSLETTER

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SLIET FOOD TECH CHRONICLE

RESEARCH • INNOVATION • SUSTAINABILITY • TECHNOLOGY

Platform of Scientists, Technologists
& Engineers Innovation
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FOOD TODAY • HEALTH TOMORROW • SUSTAINABLE ALWAYS





Department of Food Engineering and Technology

Sant Longowal Institute of Engineering and Technology **(CFTI, Under MoE, Govt. of India)**

The Department of Food Engineering & Technology at Sant Longowal Institute of Engineering and Technology Longowal is one of the premier departments dedicated to imparting quality education, research, and technical expertise in the field of food processing, food safety, and food engineering. The department aims to bridge the gap between engineering principles and food science to develop innovative, sustainable, and value-added food processing technologies. Equipped with modern laboratories, pilot-scale processing facilities, and experienced faculty members, the department provides students with strong theoretical knowledge along with practical exposure to industrial applications.

The department offers Integrated Certificate & Diploma (ICD), undergraduate, postgraduate, and doctoral programs designed to prepare skilled professionals for the rapidly growing food industry. It actively promotes research in areas such as food process engineering, food quality and safety, functional foods, waste utilization, alternative proteins, fermentation technology, and product development. The department also organizes workshops, industrial visits, expert lectures, training programs, and technical events to enhance students' professional competence and industry readiness.

With a focus on innovation, entrepreneurship, and sustainable food systems, the Department of Food Engineering & Technology continuously contributes towards academic excellence, industry collaboration, and societal development. Through its dedicated faculty, talented students, and active collaborations with industries and research organizations, the department strives to create competent food technologists and researchers capable of addressing global food challenges.



Message from the Director



It gives me immense pleasure to present the second edition of the newsletter of the Department of Food Engineering and Technology. Building upon the success of our inaugural edition, this publication continues to showcase our commitment to academic excellence, innovation, research, and collaboration. This edition highlights the achievements and contributions of faculty and students through research publications, seminars, workshops, conferences, academic activities, and other departmental initiatives. It also provides a platform for sharing ideas, accomplishments, and experiences while fostering scientific communication and professional growth.

I sincerely appreciate the efforts of the editorial team, faculty members, and students. I wish the newsletter continued success and growth.

Dr. Mani Kant Paswan
Director, SLIET, Longowal

Message from Dean, SFW



It is a matter of great pride and pleasure to present the second edition of the newsletter of the Department of Food Engineering and Technology. This edition highlights our academic achievements, research milestones, student accomplishments, and industry collaborations. I congratulate the editorial team, faculty, and students for their valuable contributions and wish the newsletter continued success in inspiring innovation and excellence.

Dr. A S Arora
Dean FSW, SLIET, Longowal

Message from Head of the Department



It gives me immense pride and pleasure to present the second edition of the newsletter of the Department of Food Engineering and Technology. This edition reflects our continued commitment to academic excellence, research innovation, and student development. I sincerely appreciate the efforts of our faculty, staff, students, and editorial team and wish this initiative continued success and growth.

Dr. Charanjit Singh Riar
Head of Department,
Food Engineering and Technology

Important Events, Activities and Achievements		
Expert Talks/Seminars/Workshops/Conferences/STTPs/FDPs/Quizzes		
Department Corner	Faculty Corner	Student/Alumni Corner

Alumni Lecture on Insights of Competitive Exam Preparation

The Department of Food Engineering & Technology organized an Alumni Lecture on 17 April 2026 for second- and third-year B.E. students. The session was delivered by distinguished alumnus Mr. Sony Goyal (GFT 2001), MBA from IIM Ahmedabad and Vice President of the SLIET Alumni Association, on **“How to Prepare for Competitive Examinations: Prerequisites and Strategies.”** The guest was welcomed by Dr. Charanjit Singh Riar, Head of the Department. Mr. Goyal shared his inspiring academic and professional journey, offering practical guidance on competitive examination preparation, time management, discipline, mentorship, and effective learning strategies. He emphasized conceptual understanding, analytical thinking, and the importance of focused preparation, while motivating students to explore higher education, entrepreneurship, and lifelong learning. The interactive session addressed students' queries on career planning and competitive examinations. The event concluded with the felicitation of the alumnus and a vote of thanks, leaving students motivated and better prepared for future academic and professional challenges.



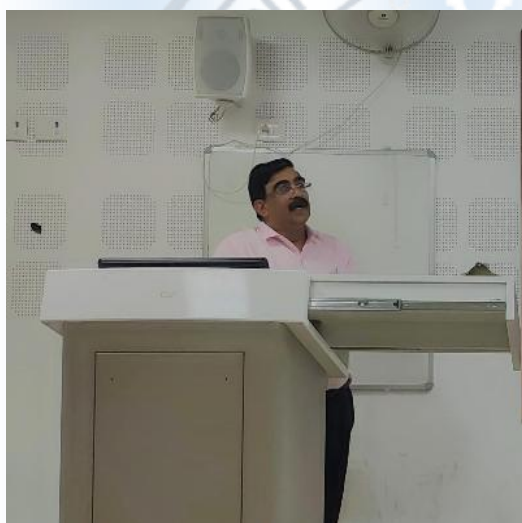
Alumni Lecture on Startup Journey in Thermal Energy Solutions

The Department of Food Engineering & Technology, SLIET, organized an Alumni Lecture on 5 May 2026 for M.Tech and pre-final year B.Tech students. The session was delivered by distinguished alumnus Mr. Ranjan Jaiswar (Batch of 2011), Founder & CEO, Thermal XE Pvt. Ltd., Delhi, along with Mr. Nikhil Nanda. Welcoming the guests, Dr. Charanjit Singh Riar, Head of the Department, highlighted the importance of alumni interaction. The lecture focused on **“Advancement in Thermal Energy Storage Solutions for Food & Pharma Logistics.”** Mr. Jaiswar shared his entrepreneurial journey and demonstrated innovative thermal energy storage systems for food and pharmaceutical logistics, emphasizing sustainable, cost-effective, and temperature-controlled solutions. The interactive session addressed students' queries on startup development, innovation, and industry applications. The event concluded with the felicitation of the alumni and a vote of thanks, providing students with valuable insights into entrepreneurship, emerging technologies, and real-world industrial challenges.



Expert Lecture on Project & Process Operations

The Department of Food Engineering & Technology, SLIET, organized an expert lecture on 22 May 2026 for its students. The session was delivered by Sh. Narinder Pal Singh, DGM (Operations), Haldiram Snack Foods Pvt. Ltd., Noida, on **“Project & Process Operation.”** The guest was welcomed by Prof. Mani Kant Paswan, Director, SLIET, Longowal and Dr. Charanjit Singh Riar, Head of the Department. Drawing from his extensive industrial experience, Sh. Singh discussed food processing project planning, automation, production management, quality assurance, and process operations from raw material procurement to product dispatch. He highlighted the significance of the 5Ms of Production, efficient resource management, and technological advancements in improving productivity and food safety. An interactive session enabled students to gain practical insights into industrial challenges, career opportunities, and innovation. The programme concluded with the felicitation of the guest and a vote of thanks, leaving participants with valuable exposure to modern food processing practices and industrial operations.



Industrial visit to PepsiCo India Holding Private Limited

The Department of Food Engineering & Technology, SLIET, organized an industrial visit on 4 April 2026 for second-year B.E. students to PepsiCo India Holdings Pvt. Ltd., Channo, Punjab. The visit was conducted under the guidance of Dr. Charanjit Singh Riar, Head of the Department, along with Dr. Tejinder Kaur, Mr. Ashwani Kumar, and Mr. Devendra Singh. Students explored PepsiCo's state-of-the-art snack manufacturing facility and observed the production processes of Lay's and Kurkure, including raw material handling, extrusion, flavouring, quality assurance, and packaging operations. Industry experts explained modern food processing technologies, hygiene practices, automation, and sustainable manufacturing systems. The visit provided students with valuable practical exposure, enabling them to relate classroom concepts to industrial applications. Overall, the experience enhanced their understanding of food processing, quality management, and large-scale manufacturing while motivating them towards future careers in the food industry.



Industrial visit to SK Agro Food Industry, Badbar

The Department of Food Engineering & Technology, SLIET, organized an industrial visit on 8 April 2026 for second-year Diploma students to SK Agro Food Industries, Badbar, Punjab. The visit was conducted under the guidance of the departmental faculty to provide students with practical exposure to modern flour milling and food processing operations. During the visit, students observed the manufacturing processes of wheat flour products, including atta, maida, and suji, along with raw material handling, cleaning, milling, grading, packaging, and storage operations. Industry experts explained the importance of quality assurance, hygienic processing, Good Manufacturing Practices (GMP), and modern milling technologies in ensuring product quality and food safety. Students also gained insights into quality control procedures, automation, and efficient production management adopted by the industry. The visit proved highly informative, bridging classroom learning with industrial practices and enhancing students' understanding of contemporary cereal processing technologies.



Industrial visit to Kandhari Beverages Pvt. Ltd. and Pagro Frozen Foods Ltd.

The Department of Food Engineering & Technology, SLIET, organized an industrial visit on 29 April 2026 to Kandhari Beverages Pvt. Ltd. and Pagro Frozen Foods Ltd., Nabipur, Fatehgarh Sahib, Punjab, to provide students with practical exposure to modern food processing industries. At Kandhari Beverages, students observed the complete beverage manufacturing process, including water purification, syrup preparation, carbonation, bottling, packaging, and quality assurance practices. At Pagro Frozen Foods, they gained insights into frozen food processing, including raw material preparation, blanching, Individual Quick Freezing (IQF), hygienic packaging, cold chain management, and HACCP-based food safety systems. The visit offered valuable exposure to industrial automation, quality control, and modern manufacturing technologies, enabling students to relate classroom learning with real-world applications. Overall, the experience enhanced their understanding of food processing operations and motivated them to pursue excellence in the food industry.



One-Week Value-Added Course on Honey Production, Processing and Quality Evaluation

The Department of Food Engineering & Technology organized a one-week Value-Added Course on "Honey Production, Processing and Quality Evaluation" from June 1–5, 2026 for undergraduate Food Technology students. Conducted under the leadership of Prof. Mani Kant Paswan, Director, SLIET, and the guidance of Prof. C. S. Riar, Head of the Department, the course was coordinated by Prof. Vikas Nanda, who designed and delivered expert lectures and hands-on training on scientific beekeeping, honey processing, quality evaluation, adulteration detection, and value-added bee products. The interactive training programme was attended by 20 undergraduate students from the Department of Food Engineering & Technology, SLIET, along with participants from Lovely Professional University, Phagwara, and Guru Jambheshwar University of Science and Technology, Hisar. Participants gained valuable practical exposure through laboratory demonstrations and interactive sessions with progressive honey producers led by Mr. Jagtar Singh Kanjhla, a renowned beekeeper from the region. The programme successfully bridged the gap between classroom learning and industry practice, enhancing participants' technical competence, entrepreneurial awareness, and employability in the apiculture and food processing sectors.



Skill Development Course on “Valorization and sustainable utilization of millet by-products”

The Department of Food Engineering and Technology, SLIET, Longowal, successfully organized a 5-days Skill Development Course on “Valorization and Sustainable Utilization of Millet By-products” from 29 May to 3 June 2026 for UG and PG students. The programme was conducted under the leadership of Prof. Mani Kant Paswan, Director, SLIET, and the guidance of Prof. C. S. Riar, Head, Department of Food Engineering and Technology. Prof. Paramjit S. Panesar coordinated the course. The programme provided students with valuable academic and practical exposure while highlighting the role of millet by-products in promoting sustainability, innovation, and a circular food economy. The course focused on creating awareness about the potential of millet by-products as valuable resources for developing innovative, nutritious, and sustainable food products. Through expert-led sessions, technical discussions, and interactive learning activities, students gained insights into value addition, sustainable processing, and the emerging opportunities associated with millet-based food systems.



Industry-Sponsored One Week Faculty Development Programme on Rheological Impact on Food Product Quality Assessment

The Department of Food Engineering and Technology, SLIET, Longowal, successfully organized the one-week Industry-Sponsored Short-Term Course on “Rheological Impact on Food Product Quality Assessment” under the banner of the AFST(I) Longowal Chapter, from 15–19 June 2026 in Hybrid mode. The programme brought together academicians, researchers, industry professionals, and participants from across the country and abroad to explore the role of rheology in food quality, texture, stability, and processing behaviour. The programme was conducted under the patronage of Prof. M. K. Paswan, Director, SLIET, and the guidance of Prof. C. S. Riar, HoD (FET). Prof. D. C. Saxena coordinated the course, assisted by Sh. Lakshmi Narayan Singh. The course covered fundamentals of food rheology, rheological modelling, viscoelasticity, and industrial applications, along with practical exposure to flow curve measurement, frequency and amplitude sweep tests, texture profile analysis, and yield stress determination. The programme strengthened participants practical skills and research capabilities in food rheology and quality assessment. The course featured expert sessions from “Micro Stable Systems” and “Anton Par” given practical exposure to advanced rheological techniques and data analysis.



Short-term Course, Faculty Development Programme organized/attended

1. A One-Week Faculty Development Programme (FDP) on “**Rheological Impact on Food Product’s Quality Assessment**” was organized in hybrid mode by the Department of Food Engineering and Technology, SLIET, Longowal, in collaboration with AFST(I), Mysuru and various industries, from 15-19 June 2026, with 107 participants.
2. A Value-Added Course on “**Honey Production, Quality Analysis and Value Addition**” was organized from 1-5 June 2026 by Dr. Vikas Nanda.
3. A programme on “**Valorization and Sustainable Utilization of Millet By-Products**” was organized from 29 May to 3 June 2026 under the ICMR Project.
4. **Prof. Charanjit Singh Riar, Prof. Sukhcharn Singh and Prof. Navdeep Jindal** attended a one-week FDP Programme on “Rheological Impact on Food Products Quality Assessment” organized by the Department of Food Engineering and Technology, SLIET Longowal during 15-19 June 2026.

Invited talk

Prof. Charanjit Singh Riar delivered lecture on “Nutraceutical from Coloured Millets: Their uniqueness, Functionality and future prospectives” in short-term training programme “Valorization and sustainable utilization of millet by-products” organized under the ICMR Project, Department of Food Engineering & Technology, SLIET Longowal held during 29 May- 3 June, 2026.

Achievements and Awards

1. **Dr. Charanjiv Singh Saini** received the Tanner Award for the Most Citable Paper of the Year 2023 in the *Journal of Food Science* for the paper “Ultrasonic Extraction of Soy Protein Isolate: Characterization and Comparison with Microwave and Enzymatic Extraction Methods,” awarded by the Institute of Food Technologists (IFT), Chicago, USA, in May 2026.
2. **Dr. Parmjit S. Panesar** received the Tanner Award for having the top-cited paper in the “New Horizons in Food Research” topic of the *Journal of Food Science*, a Web of Science (SCI/SCIE) and Scopus-indexed journal published by Wiley, USA, in May 2026.

Patent granted/filed

1. A patent titled “Process for Developing Antioxidant-Rich Black Bean Protein-Based Formulation for Diabetes Management and Product Thereof” was filed by **Dr. Pradyuman Kumar** on 10 April 2026, with Patent Application No. 202611046170.
2. A patent titled “A Tandoor for Automated Continuous Flat Bread (Tandoori Roti) Production and Method Thereof” was filed by **D. C. Saxena** on 8 May 2026, with Patent Application No. 202611037618.

Publication: Papers in journals, conference, chapters, books

Books

H.K. Sharma, Navneet Kumar, Mohd. Aaqib Sheikh ; Nutraceutical Values and Processing Techniques of Gourds as Vegetables, Springer Nature (2026). 978-3-032-19599-9 (Print), 978-3-032-19600-2 (eBook)

Papers in WoS/SCI-indexed journals –

1. Awasthi, R., Kumar, Y., Nagar, M., Bist, Y., & **Saxena, D. C.** (2026). Cold plasma pretreatment enhances the crosslinking and esterification of guinea grass starch for starch-based cheese analogue development. *Food Chemistry*, 148863. (IF – 10.4) <https://doi.org/10.1016/j.foodchem.2026.148863>
2. Sharma, R., Bhat, S. A., Srivastava, T., & **Saxena, D. C.** (2026). In-Depth analysis of nutritional, antioxidant, anti-nutritional, thermal, spectral and micro-structural properties of value-added extruded snacks. *Journal of Cereal Science*, 104433. (IF – 4.3) <https://doi.org/10.1016/j.jcs.2026.104433>
3. Singh, A., Kaur, T., Sandhu, K. S., & Riar, C. S. (2026). Strategic Review on Parboiling of Millets: A Promising Solution to Enhance Millet Processing, Storage Stability and Food Sustainability. *Journal of Food Process Engineering*, 49(5), e70575. (IF – 3.5) <https://doi.org/10.1111/jfpe.70575>
4. Kaur, T., Panesar, P. S., & Riar, C. S. (2026). Biochemical characteristics and functionality of protein isolated from hydrothermal treated foxtail millet. *European Food Research and Technology*, 252(6), 236. (IF – 4.2) <https://doi.org/10.1007/s00217-026-05156-y>
5. Das, K., Mandliya, S., & Kumar, P. (2026). Comparative effects of pretreatments and their combinations on uncooked and microwave-assisted cooked lentil (*Lens culinaris*) flours: effect on technofunctional, antinutritional, bioactive, and structural properties. *Sustainable Food Technology*. (IF – 9) <https://doi.org/10.1039/d5fb00579e>
6. Mali, P. S., & Kumar, P. (2026). High-Intensity Ultrasound-induced Structural Modification of Black Bean (*Phaseolus vulgaris* L.) Protein Isolate: Improved Amino Acid Composition, and Nutritional Profiling. *Food Biophysics*, 21(2), 39. (IF – 3.9) <https://doi.org/10.1007/s11483-026-10130-y>
7. Mali, P. S., & Kumar, P. (2026). Impact of high-intensity ultrasound on the structural integrity, functional attributes, and emulsifying properties of black bean protein isolates for food application. *Journal of Food Measurement and Characterization*, 1-19. (IF – 3.6) <https://doi.org/10.1007/s11694-026-04329-3>
8. Mali, P. S., & Kumar, P. (2026). Mechanistic Insights Into Black Bean Protein Isolate/HPMC Interactions with Anthocyanins: Enhanced in Vitro Digestive Stability and Structural Properties Via Freeze Drying. *Food Biophysics*, 21(2), 60. (IF – 3.9) <https://doi.org/10.1007/s11483-026-10152-6>
9. Sharma, P., & Kumar, P. (2026). Antinutritional factors, nutritional composition, functional, thermal, and in vitro digestibility behaviour of pea pod peel powder: effect of drying. *Journal of Food Measurement and Characterization*, 1-15. (IF – 3.6) <https://doi.org/10.1007/s11694-026-04449-w>
10. Shree, A., Sharma, A., Bist, Y., & Singh, S. (2026). Hydrocolloid-Mediated Structuring of Gluten-Free Pasta From Germinated Proso Millet Flour: Cooking, Texture, and Microstructural Properties. *Journal of Texture Studies*, 57(3), e70091. (IF – 3.2) <https://doi.org/10.1111/jtxs.70091>
11. Das, R., Mann, S., & Prasad, K. (2026). Finite Element Modeling for Bi-Directional Transport Phenomena During Vacuum Frying of Gulab Jamun: Simulations and Experimental Validations. *Journal of Food Process Engineering*, 49(4), e70493. (IF – 3.5)

<https://doi.org/10.1111/jfpe.70493>

- 12.Kaur, K., Goyal, R., Shekhar, S., Nath, A., & Prasad, K. (2026). Non-destructive Machine Vision System for Quality Assessment of Mung Bean (*Vigna radiata*). *Food Analytical Methods*, 19(7), 216. (IF – 3.0) <https://doi.org/10.1007/s12161-026-03132-6>
- 13.Kumar, S., Rai, A., & Prasad, K. (2025). Sustainable Bio-fabrication of Silver Nanoparticles via *Terminalia bellerica* Leaf Extract to Enhance Antioxidant and Antimicrobial Efficacy. *Scientia Iranica*. (IF – 1.8)
- 14.Prakash, P., Sandeep, K., Kumar, S., & Prasad, K. (2026). Comprehensive characterisation of garlic powder incorporated pasta: Nutritional, thermal, pasting, microbial, and microstructural properties. *Acta Alimentaria*, 55(2), 325-339. (IF – 1.8) <https://doi.org/10.1556/066.2026.00064>
- 15.Ramteke, A. L., & Prasad, K. (2026). Storage stability and sorption behavior of fibre-enriched extruded snacks developed with chickpea husk flour. *Journal of Food Science and Technology*, 1-11. (IF – 3.4) <https://doi.org/10.1007/s13197-026-06714-8>
- 16.Brar, D. S., Singh, B., & Nanda, V. (2026). AI-based framework to detect azo-dye adulteration in red chilli powder: ChoLevy-R optimiser for convolution neural network optimisation and validated using FTIR. *Journal of Food Engineering*, 113000. (IF – 5.8) <https://doi.org/10.1016/j.jfoodeng.2026.113000>
- 17.Sharma, A., Thakur, A., & Nanda, V. (2026). Effect of Ultrasound-Assisted Enzymatic Pre-treatment on Conformational, Rheological, and Toxicological Properties of Bee Pollen Protein Isolates for Application in Food Systems. *Food and Bioprocess Technology*, 19(6), 266. (IF – 5.6) <https://doi.org/10.1007/s11947-026-04347-5>
- 18.Goyal, R., Thakur, A., & Nanda, V. (2026). Integrated LC-ESI-QTOF-MS/MS and HS-SPME-GC-MS based characterization of volatile and non-volatile phytochemicals in spring onion (*Allium fistulosum*) varieties. *Journal of Food Measurement and Characterization*, 1-21. (IF – 3.6) <https://doi.org/10.1007/s11694-026-04394-8>

Papers in other journals –

Rakshita Bhardwaj and Charanjiv Singh Saini (2026). A comparative study of red rice variety Chhohartu with Basmati rice: Physical, nutritive, phytochemical, pasting and cooking properties. *International Journal of Food Science and Nutrition*, 11(1), 75-83, 2455-4898.

Newsletter Publication Committee:

Prof. Charanjit Singh Riar, HoD, FET 	Prof. Pradyuman Kumar, Convener 
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