HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY

(AN AUTONOMOUS INSTITUTION)



DEPARTMENT OF FOOD TECHNOLOGY NEWSLETTER

VOLUME 1

JULY '19 TO DEC '19



"IF SCIENCE IS A MASTERPIECE THEN FOOD IS IT'S TRUMP CARD"



VISION OF THE DEPARTMENT

"To be recognized for excellence in producing competent food technologists with comprehensive technical knowledge, innovative skill set and high ethical values."

MISSION OF THE DEPARTMENT

DM1: To impart sound technical and analytical knowledge to the students of Food Technology.

DM2.To inculcate leadership qualities and team spirit in addressing issues relating to the food industry and providing creative sustainable solutions.

DM3.To instill a sense of social responsibility in dealing with food processes, products and equipment.



PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

The graduates of Food Technology shall be able to **PEO1**: Apply the principles of Food Science and Engineering in academics and research to succeed in professional career. **PEO2:** Analyze and develop sustainable food processes and products with technical and economic feasibility to address global challenges through professional development. **PEO3:** Exhibit professional and managerial capabilities with ethical conduct through continuous learning.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

The graduates of Food Technology shall **PSO1:** Identify the solutions for the real-world industrial challenges and ensure food safety and quality by adopting multidisciplinary approach and novel food processing techniques.

PSO2: Apply experiential and critical thinking skills in creating new food products to become a successful entrepreneur.



PROGRAMME OUTCOMES (POs)

Engineering Graduates will be able to:

- 1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. **Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- 6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7.Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8.**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9.**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings

10.**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11.**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12.**Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

TABLE OF STUFFINGS

SPECIAL LECTURES

▶ Dr. Ramasamy, Department of Agricultural Engineering, Kalaignar Karunanidhi Institute of Technology, has delivered a guest lecture on "Recent developments in agricultural and food industries" on 28th September 2019.



Dr. RamasamyDelivering the Lecture

STUDENTS ACHIEVEMENT

- C. Mohammed Roshan, Farsin Rasak, P. Muhammed, M.N. Muhammed Yazeen, Jahfar Majeed and E. M. Sajeed of II B. Tech Food Technology have undergone internship program in ORKID BAKES AND FOODS PRIVATE LTD. During the period of 2nd December to 17th December 2019.
- Vishnu Raj of II B. Tech Food Technology have undergone marketing internship program at "UNITED BUSINESS", Bangalore during the period of 24thNovember 2019 to 23rd December 2019.

M. Varnna Priya and R. S. Subhiksha of II B. Tech Food Technology have participated and presented a paper in National level symposia on the topic of "Traditional and Novel methods of Preservation" at Paavai College of engineering on 20th September 2019.



M. VarnnaPriyaand R. S. SubhikshaPresentation

- ▶ P. A. Amaldev and V. Khais ali marakkar of II B. Tech Food Technology have undergone internship program in "VOCON Manufacturing pvt. Ltd" during the period of 06th December 2019 to 13th December 2019.
- M. Varnna priya of II B. Tech. Food Technology had undergone an in-plant training in "INDIAN FOODS pvt.ltd". (Co-packers of Britannia manufacturing) during the period of 10th December 2019 to 16th December 2019.
- ▶ P. Sarekha, M. Dhejaswini and R. Srimathi of II B. Tech. Food Technology had undergone an in-plant training at "HATSUN AGRO PRODUCTS LTD" during the period 9th December 2019 to 14th December 2019.

- M. Mohamed Afrith, T, Kishore Sadagopan and R. Prakash of II B. Tech Food Technology had undergone an internship training programme in "Cavinkare Private Ltd"., Erode under diary section, ambient products and beverage section from 3rd December 2019to12th December 2019.
- L. Siddarth of II B. Tech Food Technology had undergone an internship training programme in "United Breweries Limited" during the period of 26th November 2019 to 12th December 2019.
- P. Aparna, Hitha Baburaj, J. P. Fathimathul Zahara, Sivani V Gopal of II B. Tech Food Technology had undergone internship training programme on "Post-Harvest, Processing and Quality Technologies in Coffee" under regional coffee research station, Thandigudi during the period of 26th December 2019 to 30th December 2019.



STAFF'S ACHIEVEMENTS

Mrs. Swathi K (Assistant professor) has published a paper on "Microwave Assisted Extraction of Polyphenols from Eclipta Prostrata" in the journal "international journal of innovative research in technology"

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Microwave Assisted Extraction of Polyphenols from Eclipta Prostrata

Swathi K¹, Moharamad Ifshanullah Sheriff S², Priyenka Devi K S³ ¹Assistant Professor, Department of Food Technology, Hindusthan College of Engineering and Technology, Coimbatore Research Scholar, Department of Food Technology, JCT College of Engineering and Technology, Coimbatore ²Assistant Professor, Department of Food Technology, Konga Engineering College, Erode

Mrs. Swathi K (Assistant professor) has filed patent for "Unmanned aircraft system (UAS) for cutting coconuts and various fruits". Patent no. 315691-001.

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FOOD TECH I NEWSLETTER

INDUSTRIAL VISITS

Industrial visit was arranged to **"HERITAGE dairy products", Bangalore.** During the period of 2nd September to 4th September 2019



One day industrial visit was arranged to **"VOCON MANUFACTURING Pvt. Ltd"**, Tirupur (co-packers of bingo chips). On 3rd August 2019.



EXTRA CURRICULAR ACTIVITIES

S. M. Lowell Sahabtin Raj of II B. Tech Food Technology has won 2nd price in CENTIES football tournament.

S. M. Lowell Sahabtin Raj of II B. Tech Food Technology has won 2nd price in football tournament conducted by Sri Ramakrishna College of Engineering.

S. M. Lowell Sahabtin Raj of II B. Tech Food Technology has won 4th price in football tournament conducted by GERMINATE FC, Erode.

R. Surendhar of II B. Tech Food Technology had participated in handball held in Sri Ramakrishna College of engineering and technology



ARTICLE CORNER

Food processing: The untapped growth opportunity The food processing industry is of enormous significance as it provides vital linkages and synergies that it promotes between the two pillars of the economy, i.e. agriculture and industry



Food processing has become an integral part of the food supply chain in the global economy, and India has also seen growth in this sector in the last few years. Processing can be further delineated into primary and secondary processing. Rice, sugar, edible oil and flour mills are examples **pf**imary processing. Secondary processing includes the processing of fruits and vegetables, dairy, bakery, chocolates and other items. Most processing in India can be classified as primary processing, which has lower value-addition compared to secondary processing. There is a need to move up the value chain in processed food products to boost farmer incomes. For instance, horticulture products, such as fruits and vegetables, carry the potential for higher value-addition when compared to cereal crops.

Improving the supply chain

Gaps in the supply chain are perhaps the biggest challenge faced by this industry. Pre- processing losses occur due to lack of awareness and a dearth of storage and pack-house facilities close to the farm gate. The shortage of refrigerated vehicles is reflected through losses occurring at the transport stage. Losses occur at the storage level as well. While at an aggregate level, India's cold storage capacity is at the required levels, the reality is that 60% of these cold storages are located in just four states— Uttar Pradesh, Punjab, West Bengal and Gujarat. Variation in quality is another impediment. Lack of avenues to adequately grade, sort and pack perishable produce is a major culprit in this regard. Therefore, pack-houses are of extreme importance. The upgrading of 22,000 rural haats into Gramin Agriculture Markets (**GrAM**) was announced in the 2018-19 Budget. These are largely informal markets, but are close to the farm gate. **Farmer training and extension**

Although building infrastructure is a requisite for enhancing the processing capacity, what is also of immense importance is to have enough skills to be able to use that capacity. Backward linkages to farmers need to be made more robust.

In order to ensure sustained growth in the sector, the priority for the new government is enhancing the cold-chain capacity, logistics infrastructure, and proper ways of marketing commodities, farmer training and skilling of the workforce.

> The kitchen's a laboratory, and everything that happens there has to do with science. It's biology, chemistry, physics. Yes, there's history. Yes, there's artistry. Yes, to all of that. But what happened there, what actually happens to the food is all science.

> > Alton Brown

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MR. ABIJITH - II FT & MS. NIHARIKA BIPIN - II FT (II yr B. Tech Food Technology)

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PUBLISHER

HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY (AN AUTONOMOUS INSTITUTION) EVERYTHING IN FOOD IS SCIENCE. THE ONLY SUBJECTIVE PART IS WHEN YOU EAT IT.

ALTON BROWN

HINDUSTHAN COLLEGE OF ENGINEERING AND TECHNOLOGY (AN AUTONOMOUS INSTITUTION) DEPARTMENT OF FOOD TECHNOLOGY

