



## B.Tech. **FOOD PROCESSING and ENGINEERING**

Division of Food Processing Technology

TECHNICAL PARTNER

**Synthite**

# Admissions 2026

### Vision

Raising proficient Food Processing Engineers and Technocrats to solve the problems of food processing industries, farmers and society.

### Mission

- To raise Food Processing Engineers, academicians, researchers and entrepreneurs with high level of technical knowledge and expertise on par with global standards.
- To develop food technocrats with ethics, attitude, values and abilities to apply the acquired know-how and skills for a productive career and entrepreneurial ventures.
- To address the problems related to food safety and nutritional security through eco-friendly food processing and engineering technologies to serve humanity with care and compassion.

### Our Story of Growth and Innovation

The Division of Food Processing Technology was established in 2005 with generous funding from the Ministry of Food Processing Industries (MoFPI), Government of India, with the vision of creating a pool of highly qualified and technically competent professionals to meet the growing demands of the Indian and global food processing industries. Since its inception, the Division has emerged as a center of excellence in teaching, research, and innovation, dedicated to advancing the science and engineering of food processing for a sustainable future. Over the years, the Division has expanded its academic portfolio to include B.Tech, M.Tech, and Ph.D. programs in Food Processing and Engineering, as well as a M.Sc. in Food Science and Technology. All programs are approved by AICTE and UGC, ensuring adherence to national standards of technical and scientific education. The curriculum is meticulously designed to integrate the principles of engineering, food science, and technology, providing students with the analytical skills and practical exposure required to excel in diverse sectors of the food industry, research, and entrepreneurship.

## Programs Offered

- **B.Tech** Food Processing and Engineering (4 Years / FT)
- **B.Tech** Food Processing and Engineering (Specialisation in IoT) (4 Years / FT)

## Eligibility Criteria

Candidates must have completed 10+2 or equivalent from a recognized board with Chemistry as a subject and a minimum of 60% aggregate marks in PCB/PCM.

## Research Thrust Areas of the Division

- Plant-Based Alternate Proteins
- Design and Development of Indigenous Machinery
- Bacteriophages as Bio-Control Agents
- Sensors and Image Processing
- Novel Food Preservation Techniques – Thermal and Non thermal
- Food Waste Valorisation
- Packaging Innovation and Shelf-Life Enhancement
- Functional and Nutraceutical Foods
- Food Safety and Quality Assurance
- Sustainable Food Systems and Circular Bio economy
- Food Rheology and Texture Engineering
- Digitalization and Automation in Food Processing
- Computational and Process Modelling



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**The Head of Division**  
Food Processing Technology

## Academic and Research Infrastructure

### 1. Research and Development Laboratory

Established in 2007 with ₹4 crores funding from the Ministry of Food Processing Industries (MoFPI), Government of India, this premier facility drives innovation and practical learning. It houses advanced pilot-scale equipment—dryers, evaporators, pasteurizers, extruders, and packaging systems. The lab provides students with hands-on training and supports entrepreneurial incubation, fostering product development and process optimization in food processing technology.

### 2. Karunya Food Quality Testing Laboratory

An ISO/IEC 17025:2017 accredited facility (since 2010), offering globally recognized food quality and safety testing. The laboratory offers commercial chemical testing services for food manufacturers and suppliers, with a primary focus on edible oils. Testing parameters include Peroxide Value, Saponification Value, Free Fatty Acid Value, and Iodine Number, in line with international standards.

### 3. Precision Equipment Laboratory

Equipped with cutting-edge instruments like High-Performance Liquid Chromatography (HPLC), Gas Chromatography (GC), Water Vapour Transmission Rate (WVTR) Tester, and Texture Analyzer, this lab supports advanced testing and characterization of processed foods, enabling accurate evaluation of quality, safety, and shelf-life parameters. It provides students with hands-on training in modern analytical techniques, fostering analytical competence and research skills essential for careers in food quality assurance and product development.

### 4. Food Processing and Training Centre

The Food Processing and Training Centre (FPTC) is a licensed facility (**License Number : 12421003000828**) under the Food Safety and Standards Authority of India (FSSAI), Government of Tamil Nadu, established to promote excellence in food product development and training. The centre is equipped for the manufacture of diverse food products and serves as a vital platform for skill development and technology transfer. FPTC offers specialized programs for students, entrepreneurs, and self-help groups, enhancing skills in food processing, value addition, and quality assurance. The centre actively promotes entrepreneurship and employability in the food sector.

## Our Recruiters



**Karunya Institute of Technology and Sciences,**  
Karunya Nagar, Coimbatore - 641 114, Tamil Nadu, India  
E-mail: admissions@karunya.edu • Web: www.karunya.edu

**Tel: 0422 2363636**

**Toll Free: 1800 88 99 888, 1800 42 54 300**

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## About Us

Envisioning the growing need for skilled manpower and ensuring national food security, the Department of Food Processing Technology at Karunya Institute of Technology and Sciences (KITS) was established in 2005 with funding support from the Ministry of Food Processing Industries (MoFPI), Government of India. Since its inception, the Department has been at the forefront of nurturing scientific and technical talent for the Indian food industry, contributing significantly to research, innovation, and industrial development. The Department offers a comprehensive academic structure comprising undergraduate, postgraduate, and doctoral programs designed to meet the evolving demands of the food sector. The Department started its Bachelors Program in Food Processing and Engineering in 2005 and M.Tech. in Food Processing and Engineering and Doctoral program in 2008. The postgraduate program emphasizes advanced learning and research in specialized areas such as food packaging, food nanotechnology, nutraceuticals, automation, and sustainable food processing. The program aims to develop professionals with strong analytical, problem-solving, and innovative capabilities to address contemporary challenges in the food sector and enhance industrial efficiency.

## M.Tech. FOOD PROCESSING and ENGINEERING

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## Uniqueness of the Program

The M.Tech. in Food Processing and Engineering program at Karunya Institute of Technology and Sciences is distinctively designed to meet the evolving needs of the organized food sector while fostering innovation and entrepreneurship. The curriculum integrates advanced scientific principles with practical industrial applications, equipping students with specialized expertise in food processing, product development, equipment design, and quality management. Emphasizing both technological competence and entrepreneurial acumen, the program provides comprehensive domain-specific knowledge across key segments of the food industry, including:

- Fruits and Vegetables
- Dairy Processing
- Milling and Bakery Products
- Sugarcane and Confectionery
- Grains and Cereals
- Meat and Poultry Products
- Food Packaging Technology
- Quality Assurance and Regulatory Standards
- Research and Development

This unique blend of theoretical depth, research orientation, and hands-on industrial exposure prepares graduates to become leaders, innovators, and problem-solvers in the national and global food processing landscape.



## Thrust Areas of the Department

The Department of Food Processing Technology focuses on cutting-edge research and innovation addressing the current and emerging challenges of the food industry.

### Such as :

- Mechanization and Automation in Food Processing
- Development of Biodegradable and Sustainable Food Packaging Materials
- Internet of Things (IoT)-based Food Quality and Safety Monitoring Systems
- Artificial Intelligence and Machine Learning for Process Optimization and Control
- Novel and Non-Thermal Food Processing Technologies
- Food Product Development and Nutraceutical Innovation
- Post-Harvest Technology and Waste Valorisation
- Food Preservation, Safety, and Shelf-Life Enhancement
- Smart Sensors and Data Analytics in Food Processing
- Sustainable Energy Utilization in Food Manufacturing
- Fermentation and Bioprocess Engineering

These focus areas collectively strengthen the Department's mission to promote innovation, sustainability, and technological advancement in the food processing sector—contributing to national food security and global competitiveness.

## Infrastructure Facilities

The Program is supported by adequate faculty competence, well equipped research laboratories and sophisticated instruments.

- The **MoFPI sponsored Research and Development Centre** provides consultancy for industries in product development and equipment design.
- **Food Processing Business Incubator** with pilot scale production facility to incubate entrepreneurs.
- **MoFPI funded Laboratories** such as the Grain Processing Unit, Fruit and Vegetable Processing Pilot Scale Plant and Food Analysis Laboratory provide hands-on training for students and research scholars.
- **FSSAI Accredited Food Processing & Training Centre** to train NGOs and SHGs on food safety and food product technology.

## Eligibility

B.E. / B.Tech. / A.M.I.E. in Food Processing Engineering / Agricultural Engineering / Chemical Engineering / Food Technology / Dairy Technology / Poultry Technology / Biotechnology / Bioinformatics / or equivalent with a minimum of 50% in the qualifying examinations from a recognized University / Institution.

## Our Recruiters



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Food Processing  
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