

Thermal Processing of Foods

Overview

The Food and Agriculture Organization (FAO) of the United Nations (UN) issued a report on the importance and complexities associated with feeding the projected 9.1 billion world population in 2050. Towards meeting this goal, production of safe and nutritious foods in a sustainable manner (energy-efficient processes that limit water-use, generate very little waste products, and minimizes environmental impact) is of great importance. Some of the other important aspects associated with this are the development of foods that have a long shelf life and foods that are either ready-to-eat or easy to prepare (such as addition of water) so that they can be used when global calamities strike. Understanding “Food Engineering” and “Thermal Processing of Foods” serve as foundation of the technical means of meeting this goal.

The Food industry across the globe has been focused on using existing thermal processing technologies (such as retorting, hot-fill, pasteurization, and aseptic processing) and combining it with novel approaches including the use of microwave and ohmic heating to develop safe and high quality products. As students enter the workforce in industry, academia or government, they need to have a thorough understanding of food processing technologies, especially thermal processing of foods, so that they can be involved in the design and development of safe, nutritious, and tasty food products at the local and global scale in an economically sound and environmentally responsible manner using locally available agricultural commodities.

Modules	A: Thermal Processing of Foods : May 28 – June 1
You Should Attend If...	<ul style="list-style-type: none">▪ You are a practicing chemical/food engineer or biotechnologist designing thermal processing technologies for food processing or working with thermal processing of foods▪ You are Executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories working in the area of food processing▪ You are a student (BTech/MSc/MTech/PhD) or faculty from reputed academic and technical institutions interested in learning food processing technologies, especially thermal processing of foods
Fees	<p>The participation fees for taking the course is as follows: Participants from abroad : US \$500 Industry/ Research Organizations: ` 15000 Academic Institutions: Student: Rs. 1000 (Refundable subject to joining the course) Faculty: Rs. 5000</p> <p>The above fee include all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility. The participants will be provided with accommodation on payment basis.</p>

The Faculty



Prof. K.P. Sandeep is a professor and Interim Head in Department of Food, Bioprocessing and Nutrition Sciences at North Carolina State University, Raleigh, North Carolina. His principal area of expertise lies in the field of Food Engineering, which includes Microwave processing of viscous and particulate foods, Mathematical modeling of flow, heat Transfer, and electromagnetics during thermal processing of pumpable foods and Development of biodegradable packaging films with the use of nanotechnology. He has been actively involved in fundamental and applied research in Food Engineering over the last 20 years.



Dr. R. Anandalakshmi is an Assistant Professor in the Department of Chemical Engineering, Indian Institute of Technology, Guwahati. Her research interests are in the area of Computational heat transfer and fluid flow, Process modeling and simulation, Solar thermal energy conversion and Microwave food processing.

Course Co-ordinator

Dr. R. Anandalakshmi

Phone: 0361 - 258 3529; +91 9957368731

E-mail: anandalakshmi@iitg.ernet.in

.....
<http://www.gjan.iitkgp.ac.in/>-----