# Come see how the pieces fit together!





# **2023 Basic Thermal Processing Course**

# April 17-21, 2023 | Madera, CA

The course will be held at the JBT Madera, CA Process Technologies Laboratory and includes both classroom instruction and hands-on pilot plant experience.

#### **Contact:**

Karen Brown (559) 661-3345 | Karen.Brown@jbtc.com or Cristin Williams (559) 661-3286 | CristinD.Williams@jbtc.com for more information.

## Microbiology and Sterilization Concepts

Thermobacteriology Canned Food Spoilage Heat Resistance (D, z, and Fo values)

## Retorts and Temperature Distribution

Heat Transfer Concepts
Retort Systems Overview
Temperature Distribution
TC placement, Data Evaluation
Calibration, Instrumentation

## Heat Penetration and Critical Factors

Product and Retort-related Critical Factors HP Strategies for Different Retorts Calibration, Instrumentation TC placement, Data Evaluation

#### **Process Calculation Methods**

General Method
Ball Formula Method
Heating Factor Development
Process Calculation
Lethality Calculation
NumeriCAL™
Overview of this advanced Method

#### **Process Deviations**

Approach, consideration and evaluation of thermal process deviations.

# Regulatory Overview

Location:

JBT
Process Technologies Laboratory
2300 Industrial Avenue
Madera, CA 93637

#### Dates:

# April 17-21, 2023

#### Course Instructors:

JBT is an FDA and USDA recognized thermal process authority. Our staff has over 180 years of collective experience. Staff teaching this course includes: Karen Brown, Senior Research Engineer Terry Heyliger, Thermal Processing Consultant

## Course Tuition:

\$3,500 per student.

Register before March 1<sup>st</sup>, 2023 and receive a \$500 reduction! Lunches, refreshments and course materials provided.

## Registration:

Contact: Karen Brown (559) 661-3345 Karen.Brown@jbtc.com or Cristin Williams (559) 661-3286 CristinD.Williams@jbtc.com

# This course includes hands-on pilot plant experience

Review HP procedures and then, with your team, design and conduct a complete heat penetration study in The Process Technologies Laboratory Pilot Plant. Instrument containers and collect data. Evaluate data and then compare results to those of other teams.