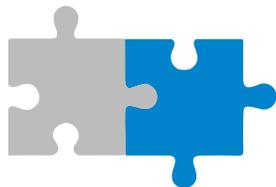


Come see how the pieces fit together!



## 2022 Basic Thermal Processing Course

April 4-8, 2022 | 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](mailto:Karen.Brown@jbtc.com) or

Cristin Williams (559) 661-3286 | [CristinD.Williams@jbtc.com](mailto: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 4-8, 2022**

### 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>, 2022 and receive a \$500 reduction! Lunches, refreshments and course materials provided.

### Registration:

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