



Short-Course April 7-8, 2026

Advanced Unit Operations in Dairy Processing

Location: Dairy Products Technology Center, CalPoly, San Luis Obispo

This workshop focuses on the fundamentals and building blocks of dairy processing. Hands-on demonstrations in the pilot plant, equipment displays/demos. No pre-requisites needed, open to all dairy processing staff.

Instructors: CalPoly faculty and staff, industry representatives, equipment and process suppliers, expert consultants. **DRAFT PROGRAM – ALL SPEAKERS TO BE CONFIRMED (INVITED)**

Individuals \$350, Discounted: 2 or more from same company \$250, Students \$75.

For more info: Samantha Bass Dr. Carmen Licon carmenl@clpoly.edu

Registration: <https://dairy.calpoly.edu/short-course-symposia>

Preferred CalPoly rates available at area hotels.

Tuesday, April 7

8:00 Registration, continental breakfast available

Building Blocks & Fundamentals

8:15 **Milk Pricing, Dairy Economics Overview**

Peter Fredericks, CDFA

9:15 **Factors Impacting Milk Production & Quality**

Rob Diepersloot, Dairy Producer

10:00 **Break**

10:15 **Fundamentals of Milk composition, Significance for Processors, Product Standards**

Dr. C. Licon, DPTC, Dr. P. Tong

11:15 **Unit Operations Part I: Receiving, Separation, Homogenization, Standardization -Creamery**

Dr. C. Licon, DPTC, Dr. P. Tong

12:00 **Lunch**

Unit Operations – Fluid Milks and Fresh Dairy

12:45 **Unit operations Part II: Concentration, Evaporation, Drying. Non-thermal treatments: UV light, HPP**

DPTC Staff

2:00 **Break**

2:15 **Operations for Fluid Milk Processing: Aseptic processing, ESL, UHT – systems and their operation**

Tetra Pak Representative

3:15 **Sanitation in the Processing Plant**

Hydrite Representative

4:15 **Fermentation – Hands-on in Pilot Plant (Port I)**

5:00 **Cocktail hour and group dinner (location TBA)**

Wednesday, April 8

8:00 Coffee, Continental Breakfast, Recap from Day 1

Unit Operations – Cheese, Proteins

8:15 **Membrane Separation, Fractionation: Equipment and Processes**

Industry representatives.

9:30 **Cheese Manufacturing Operations**

Dr. C. Licon, DPTC, Industry Representative

10:00 **Break**

10:15 **Membrane separation and fractionation of whey streams and their co-products. Permeate processing innovation**

Representative, Hilmar. Dr. Zhang, UC Davis

11:30 **DPTC Pilot Plant Demonstration - Filtration**

Dr. Carmen Lion, CalPoly DPTC, Membrane Supplier

12:00 **Lunch**

Advanced Topics, Demos & Case Studies

12:45 **Pilot Plant Demonstrations (Part II) – Coagulation, Curd Handling (yogurt, cheese) - DPTC staff**

2:00 **Break**

2:15 **Integration of Artificial Intelligence, Costs, Regulations in Decision-making – Case Studies, Q&A**

Dr. P. Tong, CalPoly, Industry Representatives

3:30 **Certificates and evaluation**

Program co-organized with CMAB/CDIC, with partial funding and contributions from Dairy Management Inc., the USDA's Pacific Coast Coalition Dairy Business Innovation Initiative and, CMAB. Spring 2026. Program subject to change.

