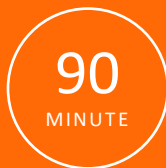


Chocolate and Cocoa Processing

Technology and Operations

DIRECTED BY

Herberto Dutra — Sr. Manager - Engineering



ACCREDITED
COURSE

Course Topics Include:

- Cocoa bean types
- Packaging technologies for chocolate products
- Utilities and infrastructure
- Wastewater treatment in chocolate facilities
- Molded chocolate pieces
- Chocolate compounds

about the course

The focus of this 90-minute accredited online training program is chocolate and cocoa processing. The course will guide students through the entire process, from cocoa beans to finished products. The program will emphasize the fundamental principles of chocolate and cocoa processing, including raw materials, finished products, equipment, facilities, and warehouse layouts.

who should attend

This course is intended for anyone currently involved in or expecting to enter chocolate R&D and manufacturing. It will be extremely worthwhile to Operations Professionals, Engineers, Scientists, Quality Control Professionals, Environmental, Health and Safety Professionals, and anyone involved with Chocolate production or who may be considering a career in this area.

Managers and supervisors of this personnel will also benefit from this training by learning the challenges faced by them.

learning objectives

Upon completion of this course, you will be able to:

- Describe the fundamentals of chocolate processing, from cocoa beans to finished products
- Explain the concepts required to develop optimal lay-out chocolate manufacturing units (refinery, panning, molding plant, packaging, warehouse, etc.)
- Give an overview of the key equipment vendors for chocolate and cocoa production from processing through packaging
- List the various types of chocolate products and applications in the confections industry

course outline

Review of Learning Objectives

Module 1: Fundamentals of Chocolate Processing

- Cocoa bean types
- The refinery: Cocoa receiving/cleaning, winnowing, liquor production, roasting, refining, and conching
- Cocoa butter pressing
- Cocoa powder processes
- What is chocolate tempering?
- Molding, enrobing and panning processes
- Packaging technologies for chocolate products – molded, panned and enrobed pieces

Module 2: Facilities: Lay-out and Infrastructure

- Cocoa receiving, refinery, panning, molding, packaging
- Tank farm for bulk storage (chocolate, liquor, and cocoa butter)
- Finished goods warehouse
- Utilities and infrastructure – Steam, compressed air, HVAC, refrigeration
- Wastewater treatment in chocolate facilities

Module 3: Applications

- Molded chocolate pieces – Bars, special shapes, etc.
- Panned and enrobed pieces – Chocolate coated almonds, pralines, raisins, etc.
- Chocolate compounds
- Boxed chocolate pieces

Question and Answer Session

Assessment Opportunity

course instructor

Herberto Dutra, Mechanical Engineer with 30 years of experience in processing industries with careers at World's Finest Chocolate, Kraft Foods, Nestle, Bay Valley, and Sensient, including many years of hands-on experience in the design and operations of chocolate production lines. Mr. Dutra's expertise ranges from the design and construction of chocolate plants, day-to-day operation, troubleshooting, and optimization. Academically, Mr. Dutra holds a Bachelor's Degree in Mechanical Engineering from UERJ (Rio de Janeiro, Brazil), an MBA from Keller Graduate School, and is currently finishing his Master's in Mechanical Engineering at Purdue University. Through his employers, Mr. Dutra has written and taught a number of training courses in Chocolate Technology, Spray Drying, Powder Handling, Agglomeration, Liquids Handling, Cooking Processes, Plant Design, Packaging, and many other programs developed for Operations Professionals, Engineering, Scientists, etc.

Accreditations



International Accreditors for Continuing Education and Training (IACET)

Cobblestone has been approved as a CEU Accreditor by IACET and awards CEUs for participation in qualified courses. Cobblestone has demonstrated that it complies with the ANSI/IACET Standards and is authorized to offer IACET CEUs for its programs. CEUs will be awarded for participation in Cobblestone's courses at the rate of .1 CEU per contact hour upon successful completion of the entire course and 70% accuracy in the required Learners' Assessment. A minimum score of 80% is required for all courses within a Cobblestone Certification Program. This course offers a total of 1.5 contact hours, or .2 CEUs. For further information, visit www.iacet.org