



Industrial Bakery and Confectionery Production Course: Dough, Ovens, Chocolate and Biscuit Lines



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Introduction:

Industrial bakery and confectionery production, covering dough processing, ovens, chocolate and biscuit lines, is a 5-day course for plant managers, production managers and food technologists, ending with a Bakery and Confectionery Line Improvement Plan for a case plant. Plants lose output, texture and margin when dough temperature, proof time, oven zone profiles and chocolate temper are adjusted by feel rather than against a line specification. Nominees already supervise or support baking and confectionery lines, and learn through inspection walkthroughs of line records, oven bands and coating stations. CoreConcept Training Center delivers this industrial bakery and confectionery production course.

Course Objectives:

- Specify flour, sugar, fat, emulsifier and leavening functions on a recipe card and link each ingredient to dough rheology and finished texture
- Control dough mixing energy, dough temperature, dividing, intermediate proof and final proof conditions on a bread or bun line
- Set tunnel oven zone temperatures, band speed and humidity to reach target bake colour, moisture and dimensions for bread, biscuits and wafers
- Run chocolate conching, tempering and enrobing and sugar confectionery cooking and depositing within their critical settings
- Diagnose common defects such as checking, blistering, fat bloom, sugar bloom and stale crumb and trace each one to a line cause
- Measure give-away, rework, scrap and line OEE on bakery and confectionery lines and rank the losses in an improvement plan

Target Audience:

- Managers responsible for the output, cost and staffing of bread, biscuit or wafer production lines
 - Managers responsible for chocolate, coating and sugar confectionery departments
 - Technologists responsible for recipes, ingredient specifications and new product trials on baking lines
 - Quality managers responsible for in-process checks, shelf life and product release in bakery and confectionery plants
 - Engineering managers responsible for mixers, ovens, tempering machines and packaging lines
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Course Outline:

Day 1: Bakery and Confectionery Plant Landscape and Ingredient Functionality

- Product Family Map of Bread, Biscuit, Wafer and Confectionery Lines
- Flour Protein, Gluten Strength and Water Absorption Specification Sheet
- Sugar, Fat, Emulsifier and Leavening Functions on Recipe Cards
- Dough Rheology Tests Using Mixing and Extension Curves
- Current-State Line Review Using Shift Output and Scrap Records

Day 2: Dough Processing, Proofing and Tunnel Oven Control

- High-Shear Mixer Energy Input and Dough Temperature Calculation
- Divider Scaling Accuracy and Intermediate Proof Recovery Time
- Final Proofer Humidity and Temperature Setting for Pan Bread
- Tunnel Oven Zone Profiling With Data Logger Traces
- Cooling Conveyor Time and Core Temperature Before Slicing

Day 3: Biscuit, Cracker and Wafer Line Operation

- Hard Dough Sheeting, Gauge Rolls and Rotary Cutting Settings
- Short Dough Rotary Moulding and Wire-Cut Depositor Adjustment
- Cracker Lamination, Fermentation and Wire Mesh Band Baking
- Wafer Batter Viscosity, Baking Plate Temperature and Sheet Moisture
- Cream Filling Spreading, Sandwiching and Stack Height Control

Day 4: Chocolate, Sugar Confectionery, Shelf Life and Defect Control

- Conching Time and Particle Size Checks With Micrometer Readings
- Cocoa Butter Form V Tempering Curve and Temper Meter Readings
- Enrober Curtain, Air Knife and Cooling Tunnel Settings
- Hard Candy Cooking, Depositing and Residual Moisture Limits
- Fat Bloom, Checking and Staling Root Cause Fishbone Analysis

Day 5: Inspection Walkthrough and the Bakery and Confectionery Line Improvement Plan

- Case Plant Walkthrough Against a Line Inspection Checklist
 - Case Oven and Tempering Records Reviewed Against Set Points
 - Give-Away, Rework and Scrap Loss Map for the Case Line
 - Line OEE Calculation Around the Oven or Enrober Bottleneck
 - Bakery and Confectionery Line Improvement Plan Completion
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Skills You Will Gain:

- Ingredient Functionality Assessment
- Dough Temperature Control
- Oven Zone Profiling
- Biscuit Forming Adjustment
- Chocolate Temper Verification
- Confectionery Defect Diagnosis
- Give-Away Reduction
- Bakery Line OEE Analysis

Why Attend This Course:

- Deliver a Bakery and Confectionery Line Improvement Plan for a case plant to the plant manager and the technical lead for approval
- Decide which mixer, proofer, oven or temper setting to change first, using logger traces and defect records rather than operator feel
- Avoid bloomed chocolate, checked biscuits, underbaked crumb and overweight packs that cost product, rework hours and customer complaints
- Coach shift leaders and line operators with the oven profile sheets, temper checks and loss maps built during the course

Conclusion:

Back at the plant, the participant hands the Bakery and Confectionery Line Improvement Plan to the plant manager, the technical lead and the engineering planner. Production uses it to fix dough, proof, oven and temper settings for each product, engineering uses it to target the stoppages on the bottleneck oven or enrober, and quality uses it to tie defect checks to line causes. After the first month of use, the team should compare give-away, scrap, defect counts and line OEE with the plan.

Frequently Asked Questions FAQ:

What should participants know before an industrial bakery and confectionery production course?

Participants should already supervise, support or improve a bread, biscuit, wafer, chocolate or sugar confectionery line. No engineering degree is needed. Bringing anonymised oven profiles, recipe cards or scrap reports helps them apply the walkthroughs to their own plant.

How does industrial bakery and confectionery production training differ from a general food processing or craft pastry course?

It concentrates on mechanised bakery and confectionery lines: dough handling, proofers, tunnel ovens, biscuit forming, wafer baking, tempering and enrobing. General food processing courses span many product types and heat treatments, while craft pastry training teaches hand techniques for kitchens.

Why does chocolate tempering matter so much in industrial bakery and confectionery production?

Tempering makes cocoa butter set in its stable crystal form, which gives coated biscuits and bars their snap, gloss and resistance to fat bloom. Poor temper shows up later on shelf as grey, dull or soft coating, so plants verify it on every run.

What do participants take back from the industrial bakery and confectionery production course?

Participants take back a Bakery and Confectionery Line Improvement Plan for a case plant, with an ingredient specification sheet, oven zone profile, temper check form, defect fishbone and give-away and OEE loss map they can adapt to their own lines.