

PROGRAM



Chocolate Manufacturing: Intense Practical Course - Chocolate (Part I)

Date: 14.07.2025 -25.07.2025

Language: English

Location: ZDS Solingen

Course fee: 6.570,00 €

Included services:

- Refreshments: snacks and drinks
- Lunch and dinner at ZDS refectory
- ZDS-Diploma „Chocolate/Confectionery“



Your instructor:

Guillermo Geschwindner
Dipl.-Ing. Food Technology,
Technical Instructor Sugar
Confectionery and Chocolate

Any Questions?

Please contact our seminar
department:

T. +49 (0) 212 59 61 32
seminar@zds-solingen.de

WEEK 1

Monday, July 14, 2025

- 09:30 **Welcome**
- 09:45 **Theory: Cocoa**
- Cocoa tree, types and history
 - Harvest, fermentation and drying
 - Quality criteria
- 11:30 **Vertical ball mills for the production of chocolate, spreads, and compounds from dosification to finished products**
- Theory: Cocoa bean processing**
- Cleaning, Roasting (bean, nib, liquor)
 - Breaking, Winnowing
 - Grinding to liquor
 - Cocoa butter and powder
- 13:00 **Lunch**
- 14:00 **Practice: Cocoa bean evaluation and processing**
- Evaluation of different cocoa beans
 - Debacterisation
 - Breaking and winnowing
 - Nib roasting
 - Pre- and fine grinding of Cocoa Nibs
- 17:30 **Final discussion and end of the first day - Dinner**

Tuesday, July 15, 2025

- 08:30 **Theory: Raw materials: Cocoa butter, cocoa powder, sugar, milk ingredients, flavor**
- Theory: Manufacturing of chocolate**
- Recipes
 - Manufacturing of chocolate (mixing process, refining process, conching process)
- 10:30 **Theory: Milk ingredients for chocolate and fillings**
- Theory: Manufacturing of chocolate (tbc)**
- Recipes
 - Manufacturing of chocolate (mixing process, refining process, conching process)
- 13:00 **Lunch**
- 14:00 **Practice: Chocolate manufacturing**
- Bühler group - Mixing, refining (5-roll refining), conching - Milk chocolate
 - McIntyre Refiner/Conche - Dark chocolate
 - Netzsch Rumba system - White chocolate
 - Packint - Ball mill - Milk chocolate
- 17:15 **Final discussion and end of the day - Dinner**

Wednesday, July 16, 2025

- 08:30 **Practice: Liquification of chocolate and finishing chocolates**
- 09:30 **Theory and practice: Netzsch Rumba system**
- 13:00 **Lunch**
- 14:00 **Practice: Chocolate tempering (manual tempering, seeding method)**
- Practice: Netzsch Rumba system**
- 17:15 **Final discussion and end of the day - Dinner**

Thursday, July 17, 2025

- **Company visits** -

Friday, July 18, 2025

08:30 **Practical exam of course topics - Part 1**

09:30 **Theory: Moulding technologies**

- Classic shell moulding
- Book moulding
- Cold stamping
- Hollow figures
- One shot depositing

13:00 **Lunch**

In the afternoon visit Schloss Burg, Solingen

WEEK 2

Monday, July 21, 2025

- 08:30 **Theory: How to Measure Viscosity and Yield Point of Chocolate**
- 11:00 **Flow properties of chocolate - Practical application
PGPR**
- 13:00 **Lunch**
- 14:00 **Theory: Particle Analysis Technology**
- 15:00 **Practice: Particle Analysis Technology**
- 17:15 **Final discussion and end of the day - dinner**

Tuesday, July 22, 2025

- **Company visit** -

Wednesday, July 23, 2025

- 08:30 **Theory: Sensorial evaluation of cocoa beans and cocoa mass (part 1)**
- Theory: Crystallisation of cocoa butter**
- Composition of cocoa butter
 - Temperindex
 - Multitherm - Bühler Crystallization Index
 - DSC
- Practice: Crystallization of cocoa butter**
- Temperindex
 - Multitherm - Bühler Crystallization Index

- 13:00 **Lunch**
- 14:00 **Practice: Crystallization of cocoa butter**
- Temperindex
 - Multitherm - Bühler Crystallization Index
- Theory:**
Fat bloom and sugar bloom
- 17:15 **Final discussion and end of the day - Dinner**

Thursday, July 24, 2025

- 08:30 **Theory: Sensorial evaluation of chocolate (part 2)**
- 13:00 **Lunch**
- 14:00 **Practice: Sugar crust liquor**
- With alcohol
 - Without alcohol
- 17:15 **Final discussion and end of the day - Dinner**

Friday, July 25, 2025

- 08:30 **Practical exam of course topics - Part 2**
- Theory: Fondant raw mass and fillings**
- Practice: Fondant raw mass production**
- Practice: Fondant**
- Fondant deposited in starch or moulds
 - Fondant as filling
 - Fondant for extrusion
- Theory: Chocolate panning**

Practice: Fondant

- Fondant deposited in starch or moulds
- Fondant as filling
- Fondant for extrusion

Theory: Chocolate panning

Theory: Chocolate panning

- Precoating
- Engrossing
- Smoothing
- Polishing
- Sealing

13:00

Lunch

Departure Solingen - Visit Chocolate Museum in Cologne

- subject to changes -