

# PROGRAM



## Chocolate Manufacturing: Intense Practical Cours: Part I Chocolate & Part II Fillings)

**Date:** 14.07.2025 - 01.08.2025

**Language:** English

**Location:** ZDS Solingen

**Course fee:** 9.430,00 €

**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:

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# WEEK 1 - CHOCOLATE

**Monday, July 14, 2025**

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09:30 **Welcome**

09:45 **Theory:**

Cocoa

- Cocoa tree, types and history
- Harvest, fermentation and drying
- Quality criteria

**Dr. Silke Elwers, Cooko GmbH**

11:30

**Theory:**

Vertical ball mills for the production of chocolate, spreads, and compounds from dosification to finished products

**ALPAVIT Champignon Hofmeister GmbH (OKG)**

**Theory:**

Cocoa bean processing

- Cleaning, Roasting (bean, nib, liquor)
- Breaking, Winnowing
- Grinding to liquor
- Cocoa butter and powder

**ZDS e.V.**

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

**ZDS e.V.**

17:30

**Final discussion and end of the first day - Dinner**

## Tuesday, July 15, 2025

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08:30

**Theory:**

Raw materials: Cocoa butter, cocoa powder, sugar, milk ingredients, flavor

**ZDS e.V.**

**Theory:**

Cocoa bean processing

- Cleaning, Roasting (bean, nib, liquor)
- Breaking, Winnowing
- Grinding to liquor
- Cocoa butter and powder

**Theory:**

Manufacturing of chocolate

- Recipes
- Manufacturing of chocolate (mixing process, refining process, conching process)

**ZDS e.V.**

10:30

**Theory:**

Manufacturing of chocolate (tbc)

Vertical ball mills for the production of chocolate, spreads, and compounds from dosification to finished products

**Packint Chocolate Machines srl**

**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

**ZDS e.V.**

**Tasting:** Milk chocolates

**17:15**

**Final discussion and end of the day - Dinner**

## Wednesday, July 16, 2025

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

## Thursday, July 17, 2025

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- 6:45     **Visit of Sollich KG, Bad Salzflen**  
**Departure** ZDS
- 9:00     **Arrival** at Sollich
- Theory:**  
· Tempering of chocolate  
· Enrobing  
· Cooling  
**Factory visit and demos**

## Thursday, July 17, 2025

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- 13.30**      **Lunch**
- 13.30**      **Departure**
- 14.00**      **Visit of Ludwig Weinrich GmbH & Co.KG, Herford**  
**Factory visit and demos**
- 17.00**      **Departure** to ZDS
- 20.00**      **Arrival and Dinner** at the ZDS

## Friday, July 18, 2025

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- 08:30**      **Practice:**  
Chocolate tempering exercise by hand, production of seasonal chocolate  
hollow figures  
**ZDS e.V.**
- 10:30**      **Practice:**  
Coating inlays with chocolate  
**ZDS e.V.**
- 12:00**      **Practical exam of course topics** - Part I
- 13:00**      **Lunch**
- In the afternoon visit Chocolate Museum in Cologne!**

## **WEEK 2** CHOCOLATE

### **Monday, July 21, 2025**

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- 08:30     **Theory:**  
How to Measure Viscosity and Yield Point of Chocolate  
**Thermo Fisher Scientific**
- 11:00     **Theory:**  
Flow properties of chocolate - Practical application PGPR  
**Palsgaard A/S**
- 13:00     Lunch**
- 14:00     **Theory & Practice:**  
Particle Analysis Technology  
**Sopat GmbH**
- 16:00     **Theory & Practice:**  
Sugar-reduced chocolates, dairy-free alternatives, specialty chocolates
- 17:15     Final discussion and end of the day - dinner**

### **Tuesday, July 22, 2025**

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- 08:30     **Theory:**  
Allergen management  
**R-Biopharm AG**
- 09:30     **Theory:**  
Emulsifier Lecithin  
**Bunge Loders Croklaan B.V.**
- 11.00     **Theory:** Cocoa butter alternatives  
• CBE  
• CBR  
• CBS  
**Bunge Loders Croklaan B.V.**

## Tuesday, July 22, 2025

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**Practice:**

Elaboration of compounds

**Bunge Loders Croklaan B.V. & ZDS e.V.**

**13:00 Lunch**

**14:00 Practice:**

Elaboration of compounds

**Bunge Loders Croklaan B.V. & ZDS e.V.**

**17:15 Final discussion and end of the day - Dinner**

## Wednesday, July 23, 2025

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08:30

**Theory:**

Sensorial evaluation of cocoa beans and cocoa mass (part 1)

**Infopoint Kakao und mehr**

**Theory:**

Crystallisation of cocoa butter

- Composition of cocoa butter
- Temperindex
- Multitherm - Bühler Crystallization Index
- DSC

**Infopoint Kakao und mehr**

**Practice:**

Crystallization of cocoa butter

- Temperindex
- Multitherm - Bühler Crystallization Index

**Infopoint Kakao und mehr**

13:00

**Lunch**

## Wednesday, July 23, 2025

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- 14:00     **Practice:**  
Crystallization of cocoa butter  
• Temperindex  
• Multitherm - Bühler Crystallization Index  
**Infopoint Kakao und mehr**
- Theory:**  
Fat bloom and sugar bloom  
**Infopoint Kakao und mehr**
- 17:15     **Final discussion and end of the day - Dinner**

## Thursday, July 24, 2025

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- 08:30     **Theory:**  
Sensorial evaluation of chocolate (part 2)  
**Infopoint Kakao und mehr**
- 13:00     **Lunch**
- 14:00     **Theory:**  
Chonova - Elevating quality & efficiency
- Practice:**  
WDS Chocolate bar plant, production and cooling  
**Johannes Burkard, CHoNova AG**
- 17:15     **Final discussion and end of the day - Dinner**



**Chocolate Manufacturing -  
Part I: Chocolate & Part II: Fillings**

Intense Practical Course

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**July 14 to August 1, 2025 · Program**



**Die Süßwaren Akademie**  
The Academy of Sweets

## Friday, July 25, 2025

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08:30

**Theory:**

Chocolate panning

**ZDS e.V.**

**Practice:**

Chocolate panning

- Precoating
- Engrossing
- Smoothing
- Polishing
- Sealing

**ZDS e.V.**

**End of the seminar part I**

**13:00**

**Lunch**

14:00

**Departure** at ZDS

**Visit at „Schloss Burg“ Solingen**

## **WEEK 3** FILLINGS

**Monday, July 28, 2025**

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09:00 Welcome and presentation of the programme

09:20 **Theory:**

Fondant raw mass

**ZDS e.V.**

**Practical:**

Production of fondant raw mass

**ZDS e.V.**

10:30 **Theory:**

Molding technology

- Traditional moulding
- Book moulding
- Cold stamping
- One Shot

**Aasted ApS**

13:00 **Lunch**

14:00 **Practice:**

Fondant as filling

Fondant deposited in starch or silicone moulds

- Fondant for chocolate shells
- Fondant for extrusion

**ZDS e.V.**

17:00 **Final discussion and end of the day - Dinner**

## Tuesday, July 29, 2025

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- 09:00     **Theory:**  
Fat-based fillings and creams  
**ZDS e.V.**
- 11:00     **Practical:**  
Traditional shell production  
**ZDS e.V.**
- 13:00     Lunch**
- 14:00     **Practical:**  
Production of fat-based filling  
· Fillings with different texture  
· Aerated fat filling  
· Filling and sealing  
**ZDS e.V.**
- 17:00     **Final discussion and end of the day - Dinner**

## Wednesday, July 30, 2025

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- 9:00     **Theory:**  
Praliné (German Nougat)  
**ZDS e.V.**
- Practical:**  
Praliné  
· Basic praliné with different methods  
· Praliné as filling  
· Laminated praliné  
**ZDS e.V.**
- 13:00     Lunch**

## Wednesday, July 30, 2025

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- 14:00     **Practical:**  
One Shot and Cold stamping technology with different fillings  
**ZDS e.V.**
- 17:15     **Final discussion and end of the day - Dinner**

## Thursday, July 31, 2025

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- 08:30     **Theory:**  
Truffle and ganache  
· Raw materials  
· Production methods  
· Shelf-life  
**ZDS e.V.**
- Practical:**  
Truffle and ganache methods **Part 1**  
· Deposited  
· Extruded/ piped  
· Cutted  
· Rolled  
· Comparison Kitchen Aid, Stephan mixer and Stephan mixer with vacuum  
· Short, middle, long shelf-life  
**ZDS e.V.**
- 13:00     **Lunch**
- Practical:**  
Truffle and ganache methods **Part 2**  
· Deposited  
· Extruded/ piped  
· Cutted  
· Rolled  
· Comparison Kitchen Aid, Stephan mixer and Stephan mixer with vacuum  
· Short, middle, long shelf-life  
**ZDS e.V.**
- 17:0     **Final discussion and end of the day - Farewell Dinner**

## Friday, August 01, 2025

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- 08:30     **Theory:**  
Croquant and brittle  
**ZDS e.V.**
- 09:30     **Practical:**  
Croquant  
· Hard croquant  
· Laminated croquant  
· Caramell: molded and cut  
**ZDS e.V.**
- Practical:**  
Finishing all products  
**ZDS e.V.**
- 13:00     **Final discussion and End of the course /** Optional Lunch

- subject to changes -