

# PROGRAM



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

**Date:** July 14 to August 01, 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

13:00 **Lunch**

14:00 **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**

**Practice:**

Chocolate manufacturing

- Bühler group - Mixing, refining (5-roll refining), conching - Milk chocolate
- McIntyre Refiner/ Conche—Dark chocolate
- Packint—Ball mill—Milk chocolate

• **Tasting:** Milk chocolates

**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

Manufacturing of chocolate

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

**ZDS e.V.**

**Theory:**

Manufacturing of chocolate (tbc)

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

**ZDS e.V.**

**13:00**

**Lunch**

14:00

**Theory:**

Milk ingredients for chocolate and fillings

**Alpavit GmbH & Co. KG**

**Theory:**

Cocoa bean processing

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

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

Intense Practical Course

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July 14 to August 1, 2025 · Program

## **Practice:**

Cocoa bean evaluation and processing

- Evaluation of different cocoa beans
- Debacterisation
- Breaking and winnowing
- Nib roasting
- Pre- and fine grinding of Cocoa Nibs
- **Tasting:** Dark chocolates & cocoa mass

**ZDS e.V.**

**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 and practice:**

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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### Visit of Sollich KG, Bad Salzuflen



6:45 **Departure** ZDS

9:00 **Arrival** at Sollich

**Theory:**

- Tempering of chocolate
- Enrobing
- Cooling

**Factory visit and demos**

**12:30 Lunch**

**13.30 Departure**

### Visit of Ludwig Weinrich GmbH & Co.KG, Herford



14.00 **Factory visit and demos**

17.00 **Departure** to ZDS

20.00 **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

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
- 13:00     Lunch**
- 14:00     **Theory:**  
Particle Analysis Technology  
**Sopat GmbH**
- 15:00     **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.**

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

Intense Practical Course

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Die Süßwaren Akademie  
The Academy of Sweets

- 11:00     **Theory:**  
Cocoa butter alternatives
- CBE
  - CBR
  - CBS
- Bunge Loders Croklaan**
- Practice:** Elaboration of compounds  
**Bunge Loders Croklaan / 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**
- 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:**  
Elevating quality & efficiency  
**CHoNova AG**
- Practice:**  
· WDS Chocolate bar plant, production and cooling
- 17:15      **Final discussion and end of the day - Dinner**

## 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 1**
- 13:00     **Lunch**  
14:00     **Departure at ZDS**  
           **Visit at Schloss Burg Solingen**

## **WEEK 3** CHOCOLATE FILLINGS

### Monday, July 28, 2025

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- 09:00     Welcome and presentation of the programme
- 09:20     **Theory:** Fondant raw mass
- Practical:** Production of fondant raw mass
- 10:30     **Molding technology**  
· Traditional moulding  
· Book moulding  
· Cold stamping  
· One Shot  
**Aasted Germany GmbH**

- 13:00      **Lunch**
- 14:00      **Practice:**
- Fondant deposited in starch or silicone moulds
  - Fondant for chocolate shells
  - Fondant for extrusion
- 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
- Fat chemistry
  - Raw materials
  - Fats for fillings and creams
- 11:00      **Practical:**  
Production of fat-based filling
- Practical:**  
Traditional shell production
- 13:00      Lunch**
- 14:00      **Practical:**  
Production of fat-based filling
- Fillings with different texture
  - Aerated fat filling
  - Filling and sealing

## 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

**13:00 Lunch**

**14:00 Practical:**

One Shot and Cold stamping technology with different fillings

**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

**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.**

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

## Friday, August 01, 2025

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08:30 **Theory:**  
Croquant and brittle

09:30 **Practical:**  
Croquant

- Hard croquant
- Laminated croquant
- Caramell: molded and cut

**Practical:**  
Finishing all products

12:30 **Final discussion and end of the seminar**

- subject to changes -