

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
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WEEK 1 CHOCOLATE

Monday, July 14, 2025

- 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

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

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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

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

Wednesday, July 16, 2025

08:30

Practice:

Liquification of chocolate and finishing chocolates

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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

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

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

- 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

- 08:30** **Theory:**
Allergen management
R-Biopharm AG
- 09:30** **Theory:**
Emulsifier Lecithin
Bunge Lodens Crocklaan B.V.

- 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

- 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

- 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

- 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

- 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

- 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

- 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

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

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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

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

Friday, August 01, 2025

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 -