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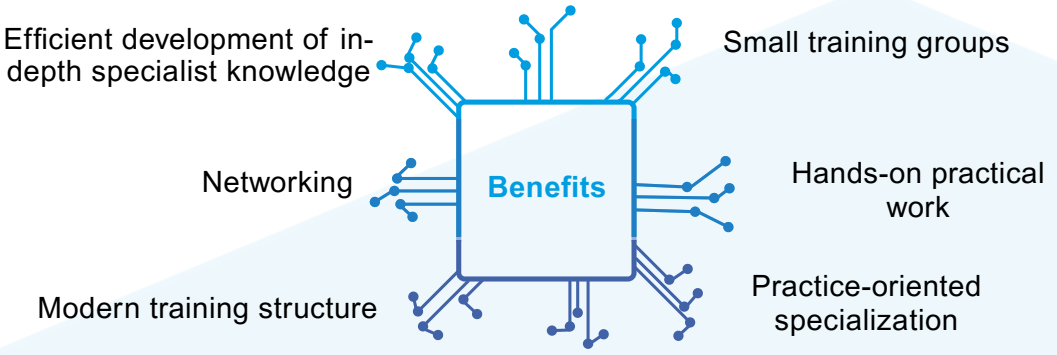
Campus B – Key Facts

Manufacturer-independent intensive training

General

Campus B is a specialist training at the cutting edge of research and technology – ideal if you are responsible for processes and want to understand and make optimum use of modern cleaning processes in the electronics industry.



Theory

The theory parts of the Campus B training program are completed online via an e-learning portal. You decide how long and how quickly you complete them. We recommend completing them before the practical part with a minimum target achievement of 65 %. As soon as you have successfully completed the theory parts, you will receive an official confirmation of your learning success.

Practise

The two-day practical part of the Campus B training program place in the training rooms and technical centre at the **kolb** headquarters in Willich. Look forward to two intensive practical days with compact knowledge transfer and practical applications – to watch and join.

Zertifikat & Handout

A digital handout and a certificate of attendance will be provided to you at the end.

Hotel recommendations

Langut Ramshof, Willich
Holiday Inn Express, Krefeld

Participation fee

1.760 € for the theory parts (e-learning) and the two-day practical part including catering. For each additional registration from the same company we grant a 10 % discount on the participation fee.

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Campus B – Theory

Time required: approx. 8 hours

B/1 Basic knowledge | Cleaning in the electronics industry

- Cleaning goods and contamination
- Reasons for cleaning
- Factors influencing the cleaning process
- Cleaning methods/cleanliness control
- Standards and norms

B/2 Basic knowledge | Cleaning chemistry

- Cleaning detergent groups/cleaning detergent properties
- pH value/Brix value/electrical conductivity
- Cleaning detergent control and analysis methods
- Water quality

B/3 Basic knowledge | Cleaning processes

- The cleaning cycle/process responsibilities
- Cleaning process procedure
- Process parameters

B/4 Special knowledge | Stencil cleaning

- Types of stencils/Reasons for stencil cleaning
- Contamination and cleaning procedures
- Cleaning methods/cleanliness control

B/5 Special knowledge | Tool cleaning

- Tools/Reasons for cleaning tools
- Contamination and cleaning procedures (for soldering frames, masks, carriers, condensate traps, filters, machine parts and more)
- Cleaning methods

B/6 Special knowledge | PCBA cleaning

- Reasons for cleaning PCBAs
- Contamination and cleaning methods
- Climate-proof PCBAs
- Cleaning methods/cleanliness control
- Standards and norms

B/7 Special knowledge | Wastewater treatment

- Excursus:
  Water shortage/resource protection
- Difference between direct and indirect discharge
- Wastewater contamination/wastewater analysis
- Wastewater treatment options

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Campus B – Practice

Agenda Day 1

08:30 am Welcome Coffee

09:00 am **Repetition**

10:00 am Coffee Break

10:15 am **B/2 Basic knowledge | Cleaning chemistry (1/2)**

Characteristics and differences between cleaning detergents
You will gain in-depth insights through interesting experiments that will enable you to better assess the behavior of different cleaning detergents in use.

Practical application of modern measurement technologies
You will learn how to safely use various measuring devices to determine cleaning detergent parameters such as pH value, Brix value, and electrical conductivity.

12:15 am Lunch

13:00 am **Company tour**

13:30 am **B/2 Basic knowledge | Cleaning chemistry (2/2)**

Efficient cleaning detergent control
You will learn proven methods for analyzing and evaluating the condition of cleaning detergent to ensure sustainable use.

14:45 am Coffee Break

15:00 am **B/4 Special knowledge | Stencil cleaning**

Understanding contamination
You will analyze the formation of contamination using a practical demonstration of the stencil printing process.

„Man vs. Machine“
You compare cleaning methods in an interactive competition between manual and machine cleaning.

Precise cleanliness control
You will perform a microscopic inspection, evaluate the cleaning results in detail, and learn which criteria are crucial.

16:45 am **Q&A and feedback**

17:15 am End of day 1

18:45 am **Dinner together**

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Campus B – Praxis

Agenda Day 2

08:30 am Welcome Coffee

09:00 am **B/5 Special knowledge | Tools cleaning**

Inspection prior to cleaning
You will examine condensate traps for typical contamination.

Demonstration of the cleaning process
You will learn how to load cleaning systems in a targeted manner and receive recommendations on procedures and processes for maximum effectiveness.

10:15 am Coffee Break

10:30 am **B/6 Special knowledge | PCBA cleaning**

Targeted preliminary analysis
You identify flux residues and other contamination on PCBAs before cleaning.

Real-time cleaning process
You observe and evaluate the condition of the contamination during the cleaning process.

Detailed cleanliness control
You perform a microscopic inspection and also use other tools in accordance with current standards and norms to accurately assess the cleaning results.

12:00 am Lunch

13:00 am **B/7 Special knowledge | Wastewater treatment**

Innovative technologies
During a demonstration, you will learn about the functionality and benefits of a wastewater treatment module with multiple filtration stages.

Heavy metal coagulation
You will observe the crucial steps involved in removing heavy metals from wastewater.

Wastewater analysis
You will learn how wastewater samples are analyzed and interpreted.

14:30 am **Q&A and feedback**

15:30 am End of day 2 und departure

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