Information
Application

The course is taught in English. Participants can be awarded with 4 ECTS credit points on completion of the Industrie 4.0 Summer School.

Application deadline | July 31, 2022

The registration fee is 500 Euro and includes beverages and the social programme (excursions included). Accommodation and catering costs are not included in the registration fee.

All participants should have a good proficiency in English as the course is completely taught in English.

Location

FH Aachen University of Applied Sciences
Institute for applied Automation and Mechatronics
Goethestraße 1 in 52064 Aachen, Germany

For more information, please refer to our Industrie 4.0 homepage: ***fhac.de/aaa/industrie4.0***

Registration

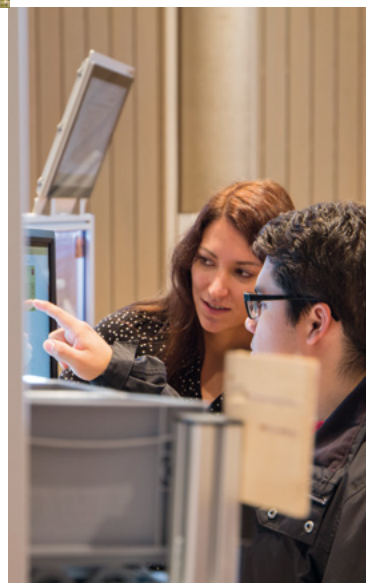
You can register online via
eveeno.com/industry40-summerschool

For more information, please refer to our Industry 4.0 homepage: ***fhac.de/FB08/Industry40***

If you have any questions, please contact us via email:
4.0Industry@fh-aachen.de

Industrie 4.0
Summer School 2022

29th August – 9th September 2022



Zertifikat seit 2009
audit familiengerechte hochschule

ZERTIFIKAT 2014
Vielfalt gestalten in NRW
Gemeinsames Diversity-Audit des Stifterverbandes und des Ministeriums für Innovation, Wissenschaft und Forschung des Landes Nordrhein-Westfalen

HAWtech
HochschulAllianz für Angewandte Wissenschaften

FH Aachen | Bayernallee 11 | 52066 Aachen | www.fh-aachen.de
Herausgeber | Der Rektor
Gestaltung und Satz | Stabsstelle für Presse-, Öffentlichkeitsarbeit und Marketing
Bilder | FH Aachen, Fachbereich Maschinenbau und Mechatronik

FH AACHEN
UNIVERSITY OF APPLIED SCIENCES

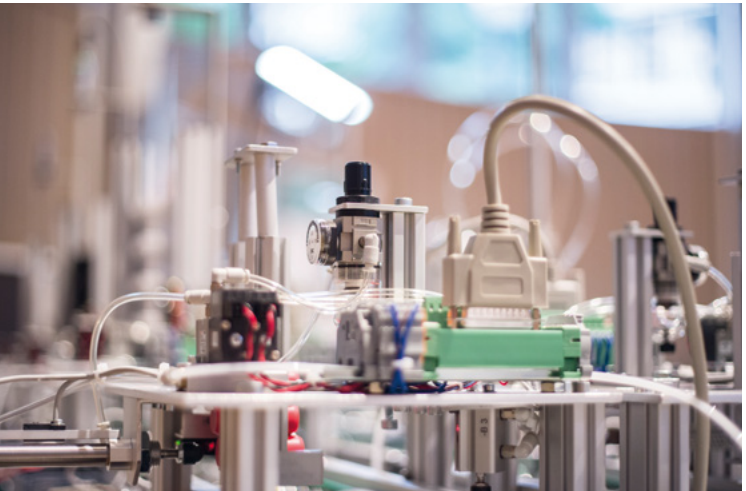
FH Aachen | Faculty of Mechanical Engineering and Mechatronics
Goethestraße 1 | 52064 Aachen

What is Industrie 4.0?

Being sustainable is one of the most important objectives of European production facilities. With Industry 4.0, the German government, in cooperation with trade associations, universities and the industry, has launched an initiative that aims to establish Germany as a leading provider of Cyber Physical Systems. Accordingly, Industry 4.0 is not a technology, but a work plan that pertains to all production areas.

New challenges are to be met and activities coordinated, starting with processes and digitally networked systems, to people and machines, through to systems and products. The Industry 4.0 platform achieves this with a holistic and coordinated strategy. Industry 4.0 is a long-term development strategy that is only gradually gaining ground in industrial production and has different effects in different Industries.

In the past few years, the key areas of work have been identified and published in various strategic publications. RAMI 4.0 has been developed as a reference architectural model that covers all areas of the digital value creation chain. Based on this, we are now able to develop new forms of production.



Industrie 4.0
Summer School

The Industry 4.0 Summer School provides insight into the objectives and strategies of Industry 4.0, shows the current status of activities and research in the field of Digital Twins and gives hints on how to benefit from the ideas linked to Industry 4.0 today.

In addition to a theoretical introduction to Industry 4.0, the main technologies and processes for the implementation of Industry 4.0, such as Digital Twins, are introduced and addressed in detail in practical workshops.

- Learn why Industry 4.0 is so important for European industry and what the idea behind the catch phrase I4.0 is.
- Analyse the development strategy for Industry 4.0 and the required actions.
- Look through the entire digital value creation chain from the intelligent sensor through to cloud services.
- Understand which technologies make a machine, system or factory Industry 4.0 capable in industrial communication.
- Discover the significance of IT, IT infrastructure and IT security in the context of Industry 4.0 for an automation system.

Preliminary programme
29th August – 9th September 2022

First week: 29th August until 4th July

29th Aug	*In the Morning:* Registration, Welcome Speech, Basics on I4.0 | *In the Afternoon:* Global View on I4.0, Get-together
30th Aug	*In the Morning:* Mastering Complex Systems, Communication in I4.0 Part A *In the Afternoon:* PLC Programming
31th Aug	*In the Morning:* RAMI4.0, Communication in I4.0 Part B *In the Afternoon:* Edge Cloud; City Tour Aachen
1th Sept	*In the Morning:* Roadmap I4.0, Basics on Cloud Systems and New Work Environments *In the Afternoon:* ESP8266 – The IoT Enabler
2nd Sept	*In the Morning:* Security & Safety for ICS *In the Afternoon:* FH Cloud
3rd Sept	Excursion in the Ruhr area
4th Sept	Day at leisure

Second week: 5th until 9th September

5th Sept	*In the Morning:* Introduction to Digital Twins (DTs), Application of DTs on selected use cases *In the Afternoon:* Introduction to Virtual Commissioning
6th Sept	*In the Morning:* Introduction to Physics Model Simulation, Modelling a Production Plant using Siemens NX MCD *In the Afternoon:* PLC Programming of the Production Plant
7th Sept	Factory visit
8th Sept	*In the Morning:* Implementation of Virtual Commissioning
9th Sept	*In the Morning:* Exam *In the Afternoon:* Final Event