



RWTH Summer and Winter School “Agile Innovation”

Experiencing international teaching, career boost and fun at the same time!

**INTERNATIONAL
ACADEMY**

**RWTHAACHEN
UNIVERSITY**

RWTH International Academy – Short Courses



Short Term Programs Team

The RWTH International Academy has conducted international Summer Schools since 2009. In 2019, the team has welcomed around 500 students in 20 different Summer and Winter School programs in Aachen.

The first Online Courses were successfully conducted in 2020/2021 and the team is looking forward to the upcoming summer 2021!

Education in Engineering, Innovation, and Management

Seminars

Certificate Courses

Inhouse Courses

M.Sc. Degree Programs

Preparatory Courses

Summer &
Winter Schools
Online Courses

Mini-Mester







RWTH
Engineering
College 3+1

“Agile Innovation” – Blended Learning



September 13
-
September 17







Summer School 2021

-  **Teaching:** Online
-  **Duration:** 1 week
-  **Conditions:** student of a Japanese partner university
-  **Workload:** 30 hours
-  **Award:** RWTH certificate of participation
-  **Language:** English



February 27
-
March 12

Winter School 2022

-  **Teaching:** On campus
-  **Duration:** 2 weeks
-  **Conditions:** participant of previous program
-  **Workload:** 60 hours
-  **Award:** RWTH certificate with 3 ECTS
-  **Language:** English

Blended learning- program structure

Blended Learning – Preparing at home and spending the winter in Germany

Experiencing international teaching, career boost and fun at the same time!



Lectures & exercises

Strategic Product Innovation

CAD Modelling Methods

3D Printing & Assembly

Project „Engineering Design“



Supporting program

Institute Visit(s)

Company excursion

Hands-on case study

Campus Tour



Intercultural Experience

(Virtual) social events

Exploring Aachen

City trips (GER, NLD, BEL)

Travelling Europe



Online teaching style & learning platform



Asynchronous learning

- video lectures
- readings
- home- & group work
- exercises & presentations

freedom | accessible | self-determined



Synchronous learning

- live sessions
- exercises and Q&As
- discussions & debates

interactive participation &
direct support by our lecturers

Tentative weekly schedule

WEEK 1 - Online Course

Japanese Time Zone (UTC +9)

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
TIME	Sept 12	Sept 13	Sept 14	Sept 15	Sept 16	Sept 17	Sept 18
11:00-12:30							
11:30-12:00			Strategies in Product Planning and Requirements Engineering	Functional Analysis	CAD and Modelling Methods		
12:00-12:30							
12:30-13:00			Function Based Design				
13:00-13:30							
13:30-14:00							
14:00-14:30							
14:30-15:00							
15:00-15:30							
15:30-16:00							
16:00-16:30							
16:30-17:00		Welcome Orientation	Strategies in Product Planning and Requirements Engineering	Requirements Analysis	Functional Analysis	CAD and Modelling Methods	
17:00-17:30							
17:30-18:00		Break					
18:00-18:30		Digital Sight Seeing Tour	Product Disassembly and Structural Analysis	Function Based Design	Product Architecture		
18:30-19:00							
19:00-19:30						Break	
19:30-20:00						Intercultural Evening & Closing	
20:00-20:30							

legend:

live events

- live lectures via Zoom
- live organizational and social events via Zoom

asynchronous learning

- pre-recorded lectures: to be prepared before respective live lectures
- self-study according to individual needs



Prof. Dr. Manuel Löwer & Dr. Tim Katzwinkel

Institute for Machine Elements and Systems Engineering

Research areas:
Product Innovation, Product Quality, Machine Design

Summer School: Full online experience



German culture in Aachen

- digital sightseeing tour
- Virtual cathedral tour
- intercultural meet-up
- spending time with the team



Social Events

- **team-building:** icebreaking games, photo challenges
- **sports:** stretching exercises
- **honoring events:** welcome and certificate ceremony



Tentative weekly schedule

WEEK 2 - Winter School - On Campus

German Winter Time (UTC +1)

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
TIME	Feb 28	March 01	March 02	March 03	March 04	March 05	March 06	
9:00-9:30			Introduction to 3D Printing	Project: Goal Definition and Concept Development	City Excursion to Maastricht (The Netherlands)	Project: Engineering Design (1st Sprint)	Free time for self-study	
9:30-10:00								
10:00-10:30		Welcome Orientation						
10:30-11:00								
11:00-11:30								
11:30-12:00								
12:00-12:30								
12:30-13:00								
13:00-13:30								
13:30-14:00								
14:00-14:30		Get to know Aachen: City Rally	Intercultural Workshop	Project: Engineering Design (1st Sprint)				2nd Review of Engineering Design
14:30-15:00								
15:00-15:30								Project: Engineering Desing (2nd Sprint)
15:30-16:00								
16:00-16:30								
16:30-17:00								
17:00-17:30								
17:30-18:00								
18:00-18:30								
18:30-19:00								
19:00-19:30								
19:30-20:00								Karaoke Night
20:00-20:30								

legend: academic content academic supporting program organizational and social events



Prof. Dr. Manuel Löwer & Dr. Tim Katzwinkel

Institute for Machine Elements and Systems Engineering

Research areas:
Product Innovation, Product Quality, Machine Design

Tentative weekly schedule

WEEK 3 - Winter School - On Campus

German Winter Time (UTC +1)

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
TIME	March 07	March 08	March 09	March 10	March 11	March 12	March 13	
9:00-9:30	Free time for self-study	Project: Engineering Design (2nd Sprint)	Project: Engineering Design (2nd Sprint)	Company Visit: thyssenkrupp Steel Europe AG	Project: Inspection and Assembly of 3D-Printed Parts; Finishing of Prototype	Presentation and Show Session: Final Concepts		
9:30-10:00								
10:00-10:30								
10:30-11:00								
11:00-11:30								
11:30-12:00								
12:00-12:30								
12:30-13:00								
13:00-13:30								
13:30-14:00								
14:00-14:30		Hiking to the Border Triangle	Project: Engineering Design (2nd Sprint)		Scientific Documentation and Presentation	Closing Ceremony		
14:30-15:00								
15:00-15:30								
15:30-16:00								
16:00-16:30								
16:30-17:00								
17:00-17:30								
17:30-18:00								
18:00-18:30			Summer School BBQ					
18:30-19:00								
19:00-19:30								
19:30-20:00								
20:00-20:30								

legend: academic content academic supporting program organizational and social events



Prof. Dr. Manuel Löwer & Dr. Tim Katzwinkel

Institute for Machine Elements and Systems Engineering

Research areas:
Product Innovation, Product Quality, Machine Design

Winter School: All-inclusive Package



Room & Board

- Accommodation (usually 3- or 4-bed rooms)
- Breakfast and lunch on weekdays
- Local public transportation ticket
- Emergency contact number



Social Events & Excursions

- Sightseeing
- BBQ
- Hiking tour
- City Excursions
- Karaoke Night

