# **Plastics - Boon and Bane**

3. – 16. August 2025 Summer School in Germany

## **Scientific Program**

- Material and Behavior
- Processing
- Applications
- Lightweight in Aviation
- Bio-Plastics
- Recycling and Sustainability
- Plastic waste





## **Requirements**

- Motivation and Interest
- General Engineering Knowledge
- Language: English
- Credits: 3 ECTS
- Co-Payment for Lectures, Labs, Excursions
  - Foreign Students 500 € (accommodation included)
  - HSRM Students 150 €





### **Excursions**

## **Cultural Program**

- Waste-to-Energy Plant
- Industrial Museum
- @ HSRM Labs:
- 3D-Printing + Microplastics
- Flight Simulator









- Rhein River, old Castel
- ESA (European Space Agency)
- Visit: Frankfurt, Mainz, Heidelberg, Darmstadt
- Traditional Food Tasting

#### **Contact**

#### **University of Applied Sciences**

Faculty of Engineering Prof. Dr.-Ing. Tamara van Roo <u>summerschool-ing@hs-rm.de</u>

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# **Scientific Program**

What is plastic for us? Boon or bane?

Are you interested in exploring the multifaceted world of a fascinating material? Then join us for an exciting two weeks, where you will explore the world of plastics that shape our lives!

In this Summer School, you will gain insights into the world of plastics with their most important properties as well as manufacturing, processing methods and recycling. Discover how this material impacts various industries, including aviation or medical technology. No other material exhibits such a broad spectrum of outstanding technical properties and entails such significant responsibilities for the environment. Engage in thought-provoking discussions on the sustainability strategies of different countries and the pressing issue of plastic waste.

As part of this enriching experience, you'll participate in various excursions, e.g. to a waste-to-energy plant, where you can witness firsthand how innovative energy solutions are transforming waste management and to a material producer founded 176 years ago and now focusing on elastomeric components. In-house you will visit the microplastic laboratory and university's additive manufacturing lab and print your own souvenir.



### **Cultural Program**

A rich cultural program, language lessons and a short briefing about the German culture will round off the Summer School.

Immerse yourself in historic castles along the Rhine River, the European Space Agency ESA, and vibrant cities like Frankfurt with a new Old Town, Mainz and its Cathedral, Darmstadt well known for the Jugendstil architecture, and Heidelberg offering a hike along the philosopher's walk with a view on the old Castle. Last but not least you will taste traditional German cuisine.

Don't miss the pleasant combination of learning with international students and exploring Germany.

Newcomers, enthusiasts and soon-to-be-experts are welcome to jump right into plastics engineering. See you in Rüsselsheim!

### Registration

- Closing date for registration: 13. July 2025
- Application via e-Mail: <a href="mailto:summerschool-ing@hs-rm.de">summerschool-ing@hs-rm.de</a>
- Sign in via Conference Management Tool