

Registration deadline: 30 November, 2022.



and



present a short course on

Plastics and sustainability

Chemistry, characterization, processing,
applications and environmental impact

January 23-25, 2023

Enschede, The Netherlands

Rapid deterioration of the quality of our natural environment, a growing need of using finite resources, and recent legislation directed tremendous attention to natural polymers, plastics recycling, macromolecular biodegradability, and circular economy approaches, including also elastomers. This course aims at selected areas of related challenges and will bring participants in these areas to the current level of the state of the art.

UNIVERSITY OF TWENTE. | **MESA+ INSTITUTE**

The course is organized under the auspices of
Polymer Center Twente.

Participation fees

The course is designed for 20 participants attending the lectures. Space is limited for the hands-on section (*first comes-first served*).

Course attendance fee

Days 1-2 (lectures): 1,800 € + VAT;
Day 3 (hands-on): 800 € + VAT.

Dinner with round-table discussion on day 2 is included. The fee also includes course handouts, lunch, and coffee breaks.

Graduate students (MSc, PhD with proof of registration) receive a discount of 40 % (limited space will be available).

Terms of registration: 500 € pre-payment of the registration fee is required, which is fully refundable until 31 December, 2022.

Deadline of full fee payment: January 15, 2023.

Location

University of Twente (Universiteit Twente), Building Carré.

The campus of the University of Twente is located in the Twente region, between the cities of Hengelo and Enschede. Address: Hallenweg 23, 7522 NH, Enschede, the Netherlands. (<https://www.utwente.nl/en/contact/route/>)

Participants are responsible for their own hotel booking. Special rates for accommodation are offered at the U Parkhotel, Enschede (<https://www.uparkhotel.nl/>).

Contact info

All questions and inquires should be addressed to info@plast-sus.org



For regularly updated information please visit:
<https://plast-sus.org>, or scan the QR code →



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Who should attend?

The course is designed for practitioners in polymer science and technology, as well as for industrial managers to enhance and upgrade relevant knowledge. Young researchers and graduate students are also welcome.

Day 1, lecture block

09:00 Prof. Frederik R. Wurm *Group leader of Sustainable Polymer Chemistry (SPC) at the University of Twente (UT – Enschede, NL)*

- Introduction to "bioplastics": Power and weakness of biodegradable and biobased polymers

11:00 Prof. G. Julius Vancso *Emeritus Chair of Materials Science and Technology of Polymers (MTP) at the UT*

- The characterization challenge of sustainable plastics

12:00 Lunch

13:00 Dr. Wilma Dierkes *Associate Professor of the Elastomer Technology and Engineering group at the UT*

- Elastomers: Sustainability vs. durability

14:30 Dr. Andras Bartos *Research Scientist at Sulis Polymers B.V. (Enschede, NL)*

- Multicomponent systems with natural constituents: Properties & processing

16:00 Dr. Hubert Gojzewski *Assistant Professor of the Sustainable Chemistry Group (SPC) at the UT*

- 3D printing with polymers: How sustainable can it be?

Day 2, lecture block

09:00 Dr. Joost Duvigneau *Assistant Professor of Sustainable Chemistry Group (SPC) at the UT*

- Recycling of plastics: Opportunities and challenges for a sustainable and circular carbon-based economy

11:00 Prof. Dr. Mirosława el Fray *Head of Division of Functional Materials and Biomaterials at the University of Szczecin (PL)*

- Sustainable polymeric composites for disposable medical devices

13:00 Lunch

14:00 Dr. Carolin Völker *Head of Junior Research Group PlastX, Institute for Social-Ecological Research (ISOE) (Frankfurt, DE)*

- Plastics in the environment - dangerous or harmless? An ecotoxicological consideration

16:00 Prof. Dr. Boelo Schuur *Professor in the cluster Process & Catalysis Engineering at the UT*

- Life cycle assessment for polymers and polymer products: Impact of different end-of-life scenarios

18:30 Dinner and round-table discussion, closure of the lecture block

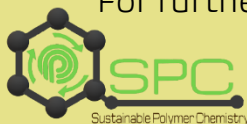
Day 3, 09:00, hands-on block

Melt processing: Focus will be laid on practical aspects of melt processing-related issues that may occur during manufacturing of eco-friendly plastics using an internal mixer. Moisture- and heat sensitivity of biocomponents and consequences will be elucidated.

Life cycle assessment (LCA): As a representative example for social and environmental life cycle assessments, a case study will be performed illustrating the global value chain involving cellulosic polymers (jeans) as a showcase from the textile sector.

The participants will be separated into two groups, switching topics after lunch (~12:30). Closure of the hands-on block at 17:00.

For further information, please visit <https://plast-sus.org>



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