proBIOGAS International

Biogas engineering and operating training with field trips

September 21 – 25, 2026

Venue: SHMT – Steinbeis House for Management and Technology
Filderhauptstr. 142, 70599 Stuttgart

Monday, September 21st – Practical Plant Engineering	
08:30	**Registration**
09:00	**Welcome to the seminar** *Michael KÖTTNER, IBBK Fachgruppe Biogas GmbH*
09:30	**Introduction into plant technology** • Digester types • Prestorage, feed in and pretreatment technology (ensiling, mixing pit, hydrolysis) • Other process technologies • Most common design principles • Shapes & designs of digesters and equipment
11:00	Coffee break
11:15	**Basic process parameters for planning** • Calculating retention time, organic loading rate and digester size • Determining electricity and heat production • Exploring efficiency factors of gas utilization • Discussion of the results
12:45	Lunch
14:00	**Crucial substrate parameters and their impact on plant performance** • Sampling and analysis methods for agricultural and industrial substrates • Definition of the substrate quality – right and wrong way of analyzing • Impact on planning, design and practical operation • Forecast possibilities on plant process disturbances
15:30	Coffee break
15:45	**Pumps and mixing technology**
17:00 17:15	Discussion End of the day

Tuesday, September 22nd – Practical Plant Engineering	
09:00	**Daily Tasks and Startup**
10:30	Coffee break
10:45	**Pretreatment and prestorage technology** • Ensilaging and pre-storage technology • Purpose and designing of mixing pit and hydrolysis phase • Pretreatment of difficult substrates • Dealing with high fibre and high nitrogen content
12:15	Lunch
13:30	**Safety features of biogas plants and equipment**
15:00	Coffee break
15:15	**Proper usage of digestate as organic fertilizer in agriculture** • Fertilizer management • Field application • Digestate processing • Fiber and fertilizer production
16:45 17:00	Discussion End of the day

Wednesday, September 23th – Practical Plant Operation (Unterer Lindenhof)	
09:00	**Digester Biology – an introduction**
10:30	Coffee break
10:45	**Visit of the research plant at Unterer Lindenhof.**
12:15	Lunch
13:30	**Interactive group and field session – Necessary on site tests and practical interpretation of operating modes on a biogas plant** • Substrate and digester content sampling • Testing parameters during operation

	• Practical devices for plant monitoring • Record keeping • Technical and safety evaluation on a biogas plant Short travel by coach Meeting point: parking area in front of “SHMT” Meeting time: 13:30 Departure: 13:45
17:00	End of the day

Thursday, September 24th – Visits	
08:15	**Biogas Plant visit**
13:00	Lunch
14:30	**Biogas Plant visit**
18:15	End of the day

Friday, September 25th – Practical Digester Biology	
09:00	**Meet the challenge: How to digest fibrous and N-rich feedstocks** • Characteristics of the substrates • Causes of an NH_3-inhibition (feedstocks, NH_3-formation, pH, temperature) • Counter measures, case studies and practical examples
10:30	Coffee break
10:45	**Process control and process optimization** • Inhibitors in anaerobic processes • Additives (trace elements, enzymes, sulphur binder, buffer) • Process control measures
12:15	Lunch
13:30	**Operating a bio-waste and food waste plant** • Building materials • Operational requirements

	• Waste pretreatment process
15:00	Coffee break
15:15	**Lab tour University of Hohenheim**
16:45 17:00	Discussion Handout of the certificates and end of the event

Program is subject to change

In cooperation with:

- the State Institute of Agricultural Engineering and Bioenergy, University of Hohenheim, Stuttgart, Germany
- Akademie Schloss Kirchberg, Kirchberg, Germany