Participation Fee

The participation fee includes all course material, coffee breaks and two lunches as well as the evening events including a joint dinner.

Registration:

Until	1st March 2017	850 €*
After	1st March 2017	950 €*
Students		700 €*

*Discount for VIVTA Members 70 €

Location

The lectures are taking place in the

Ford-Saal, Super C, RWTH

Templergraben 57
52062 Aachen.

Begin: Monday
29th May 2017 at 12:00 pm

End: Wednesday
31st May 2017 at 12:30 pm

In a nutshell

The first lectures deal with the theoretical and fundamental principles of membrane technology and membrane materials. On this basis, fouling, scaling and monitoring as well as waste water treatment and industrial water applications are focused. All lectures are held by senior scientists and engineers with outstanding experience in the field of water and membrane technologies both in research and in industrial operations.

The theoretical part of the course is balanced with a case study and the visit of our laboratory and pilot scale sites. A joint dinner and a guided tour through Aachen's historic city center complete the course programm.

Registration & Contact

Aachener Verfahrenstechnik
Chemical Process Engineering

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The course is hosted by:

vivta

www.vivta.de

Version: 15th April 2016

Membrane Course for Water Technologies

29th – 31st May 2017

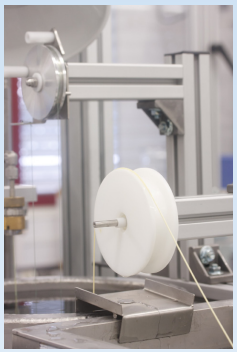
Chemical Process Engineering
Prof. Dr.-Ing. Matthias Wessling
Dr.-Ing. Süleyman Yüce

External Speakers:

to be announced

Aachener Verfahrenstechnik | RWTH AACHEN UNIVERSITY

Course Aims



Membrane processes are applied in many industrial applications such as waste water treatment, drinking water production, gas separation and many more. In particular, water technologies depend strongly on membrane processes. Therefore, this course aims to give a sound knowledge of membrane technologies used in water industries.

Present established technologies such as micro- and ultrafiltration (MF and UF), nanofiltration (NF) and reverse osmosis (RO) will be covered, both from a theoretical point of view but also with a view to real applications being used in specific cases. Furthermore, emerging technologies such as electrodialysis, or forward osmosis will receive attention. In addition to inspiring lectures covering the theoretical background, an interactive case study and a fascinating lab tour offer the possibility to gain insight into practical experience.

The course will not require any specific previous knowledge in membrane technologies and is thus advisable to any professional, either from R&D, engineering, production, marketing or sales who would like to obtain a theoretical background on the subject backed by practical experiences. The lectures will be held by senior scientists and engineers who are experts in the field of water membrane processes. Coffee breaks, lunches and the joint dinner offer the possibility for discussions and networking.

Content

Fundamental
- Mass transport
- Modeling of mass transport

Materials & Structures
- Membrane materials for water and waste water applications
- Future trends in membrane materials

Membrane module
- Design
- Optimization
- Hydrodynamics
- Energy efficiency

Fouling & Scaling
- Fouling and scaling on membrane surfaces
- Concentration polarization
- Operation modes

Waste Water Treatment
- Micro- and ultrafiltration treatment
- Membrane bioreactor

Industrial Water Applications
- High load waste water
- Zero Liquid Discharge (ZLD)
- Boiler feedwater
- Water treatment for medical purposes

Monitoring
- Sampling
- Analysis & Interpretation
- Safety

Drinking Water
- Micro- and ultrafiltration for drinking water
- Micropollutants removal with nano filtration
- Desalination: reverse osmosis & electrodialysis

Lab Visit
- Visit of laboratory and pilot scale sites of AVT.CVT

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