

WindGuard Training Courses

Deutsche *WindGuard* is a competent and very **experienced** service provider for the wind industry. We are **independent** consultants and experts for wind energy. You can benefit from our knowledge by attending our **WindGuard Training Courses, Workshops** and **Post-Graduate Courses**.

We have developed modular course programs with hands on **practice-orientated contents** for beginners and industry experts. Our topics are always **up to date**, as we deal daily with the challenges of the wind industry.



Our training courses are run by qualified *WindGuard* lecturers with many years of experience in the wind industry, research and lecturing. We prefer **application-orientated methods** with demonstrations, lab experiments and excursions.

Deutsche WindGuard cooperates closely with universities and other research institutes. Together with these partners we have accomplished several international post-graduate programs. Due to our excellent

industry contacts, we have the opportunity to integrate even more experts on particular topics in our training courses.

Our seminars will be customised to meet your requirements. You determine topics, course duration, venue and language. A proposal for a beginner's seminar can be found on the next page. We offer in-house seminars in your company as well as seminars in our conference room. Training courses are held in German and English. Other languages e.g. French are available on request.



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WindGuard Beginner's Training

"Basics of Wind Energy Utilization" (BT) – 2 days

Module 1 „State of the Art and Basics of Wind Energy“

- Development of wind energy
- Physics and aerodynamics of wind energy converters (WEC)
- Drive train concepts & tendencies in WEC technology
- Virtual visit of a WEC focussing on targets of design

Module 2 „Basics of Design and Production“

- Wind physics and energy yield calculation
- Rotor design & WEC control
- Loads on WEC
- Manufacturing of WEC

WindGuard Advanced Training 1 (AT1) – 1 day

Module 3a - “Wind Farm Site Assessment”

- Aspects of sophisticated wind measurement campaigns
- Wind farms in complex terrain
- Special site conditions around the world
- Additional equipment for WEC at special sites

WindGuard Advanced Training 2 (AT2) – 1 day

Module 3b - “Wind Farm Realisation”

- Issues of project planning
- Logistics and site preparation
- Details of construction and installation
- Critical aspects of wind farm realisation and possible consequences

Your lecturers:



Dipl.-Ing. Jan Liersch, born in 1965, is CEO of Deutsche WindGuard Knowledge GmbH and head of knowledge-transfer. He also lectures “Wind Turbines I & II” at the Technical University of Berlin and is co-author of the book “Wind Power Plants” published by Gasch and Twele.



Dr. Christoph Heilmann, born in 1968, works in R&D and knowledge-transfer at WindGuard. He also lectures “Systems Engineering I” (wind turbines) at the University of Applied Sciences FHTW in Berlin and is co-author of the book “Wind Power Plants” published by Gasch and Twele.