

COURSE LEADER

Dr.-Ing. Wolfgang Berns
Managing Director
BERNS Engineering Ltd.
www.berns-engineering.com

COURSE INSTRUCTORS

Prof. Dr.-Ing. Stephan Staudacher

Director of the Institute of Aircraft Propulsion Systems,
Stuttgart University

Dr. Wolfgang Berns

Managing Director
Various former positions in performance and controls of
turbojet engines and power plant gas turbines,
BERNS Engineering Ltd.

Dr. Michael Bauer

Team Leader Functional Systems Integration,
MTU Aero Engines GmbH

Prof. Dr.-Ing. Roland Fiola

Head of Functional Systems Engineering,
Rolls-Royce Deutschland Ltd. & Co. KG

All instructors have an extensive track record in their
fields of expertise gained at world-leading gas turbine
manufactures in the course of the last 20 years.

Currently, they hold senior positions in aerospace
companies, or they lead highly acknowledged university
institutes. Close cooperation between the aviation
industry and research institutions at the universities is
a priority for our instructors.



Aerospace is a key driving force for new technologies. Many trendsetting innovations were developed in enterprises and research institutions belonging to the aerospace industry. Products must fulfil severe quality requirements and work reliable under extreme conditions. High qualified employees are the base for success.

The ASA is an institute of Steinbeis University Berlin and provides a variety of specialized courses and professional trainings to allow companies to hone the skills of their employees and continuously build on their capabilities. Working with leading international experts, we provide in-sight into the very latest research and technological advances.

CONTACT

German Aerospace Academy (ASA)
Forum 1 am Konrad-Zuse-Platz 1
71034 Böblingen

Phone: 07031/306975-0
Fax: 07031/306975-79
E-Mail: zl@german-asa.de
Web: www.german-asa.de



Founded in 1998, Steinbeis University Berlin (SHB) is a private, state-approved university that offers students and companies practically-oriented degree programs that dovetail with full-time employment. It also conducts research into issues related to business practice. The SHB portfolio includes certification courses, degrees and PhD programs, all recognized by the German state. The SHB is an enterprise in the Steinbeis Network, which operates throughout the world in the field of application-based knowledge and technology transfer.



STEINBEIS CERTIFICATE COURSE "GAS TURBINE PERFORMANCE"



Bildrechte Dr. Berns



TARGET AUDIENCE

Target groups are engineering graduates and experienced engineers, but also other professionals and managers who are interested in gaining or in further developing their knowledge of the field of Gas Turbine Performance. It is equally suitable for both specialists striving to broaden their knowledge base and for newcomers to this field.

CONTENT

This 5-day certificate course gives an insight into the state of art methodologies, technologies and its applications in Gas Turbine Performance by covering a selected range of key topics associated with practical experience in this field.

Module 1

Thermodynamic basics of gas Turbine performance, How Performance Programs work, Design Point and Cycle Choice

Module 2

Steady state performance and Non-dimensional margins , Pass Off Testing and trimming

Module 3

Transient performance Gas Turbine Controls, Control systems

Module 4

Steady state analysis, Rake checking, Model based test analysis, Monitoring

Module 5

Transient analysis, Instrumentation, Rig and engine testing

COURSE PROCEDURE

The certificate course includes 5 days of seminars, one day for each module, in the training rooms of the ASA. A one-hour written test will be administered a few weeks after the seminars.

CERTIFICATE

Upon successful completion and passing of the test, participants are awarded a certificate by the Steinbeis University Berlin. In addition, 3 internationally accepted ECTS credit points are awarded. Grading is based solely on the written test.

ADMISSION REQUIREMENTS

The course is open to participants with a Bachelor's degree and background in a technical field

COSTS

Fee for complete seminar 3.500,- Euro

The fee includes material cost and meals, but does not include VAT (19 %).

IN-HOUSE COURSE

We are also able to offer this course on site in your company for your employees. Please contact us for more information.

SEMINAR ONLY

All seminars are also open to participants who are not seeking certification at the moment. Those participants do not have to take the written test and will get a certificate of attendance by the German Aerospace Academy.

ADDITIONAL INFORMATION

More information about dates, programs, application and registration can be found at www.german-asa.de

COURSE OBJECTIVES

This course provides a thorough understanding of gas turbine performance based on gas turbine theory and practical experience in the design, development and testing of gas turbines, as well as in-service experience.

In this regard, it is primarily tailored to aero engine applications but performance characteristics of gas turbines for power generation will also be addressed:

- Understanding of engine thermodynamics
- Selection of the thermodynamic gas turbine cycle
- Steady state and transient gas turbine performance
- Application of engine controls
- Methods for steady state and transient gas turbine performance analysis



BERNS Engineering and BERNS Engineering Consulting - two engineering companies with a track record in delivering professional systems engineering support and engineering consulting in niche domains, predominantly in Aerospace, Power Generation, and Automotive sectors.

BERNS Engineering focuses its capabilities on systems and safety engineering applications.

BERNS Engineering Consulting supports its customers in transforming systems engineering processes and in the implementation of systems engineering solutions.