

## CERTIFICATION HIGHLIGHTS

Quality by Certification – Improve your chances with a “Propulsion Systems Engineer” certificate:

- The quality seal of a systematic and high-value education, on an international level, with a “Propulsion Systems Engineer” certificate from the Steinbeis University.
- An internationally acknowledged certification from the Steinbeis University. The participants get trained based on international best practices.
- Practical education by the use of case studies, best practices and product developer experience.
- Direct application of the training concepts in group and independent exercises.

## COURSE LEADER

### Prof. Dr. - Ing. Stephan Staudacher

Prof. Dr.-Ing. Stephan Staudacher, born in 1965, studied Mechanical Engineering and afterwards he did his Ph.D. at the Munich Technical University. He is Director of the Institute of Aircraft Propulsion Systems at the University of Stuttgart. Before, he was Director of Production at Rolls-Royce Germany Ltd & Co. KG and was in different leading engineering and development positions at BMW Rolls-Royce Aero Engines GmbH.

### Dr.- Ing. Wolfgang Berns

Managing Director and owner of BERNs Engineering Consulting GmbH with more than 25 years engineering experience in the aerospace (engines, aircrafts) and power generation (gas turbines, wind turbines) industry. He has gained them from a number of engineering and managerial functions in highly acknowledged companies likewise Rolls-Royce Deutschland, MDS Aero Support (Canada), Alstom Power (Switzerland). In addition, he has a track record as lecturer in the field of turbomachinery engineering at the University Stuttgart and at the Technical University in Berlin.

## VENUE

German Aerospace Academy (ASA)  
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Aerospace is a key driving force for new technologies. Many trend-setting 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

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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 Certification Course  
**Aircraft Propulsion Technology**  
and qualification as a

**“Propulsion Systems Engineer”  
(SHB)**





# Certification Course: Propulsion Systems Engineer (SHB)

## TARGET AUDIENCE

Target groups are graduated engineers and advanced engineers, but also professionals and managers who are interested in gaining or in further developing their knowledge in the field of Gas Turbine Performance. Thus, the course is equally suitable for both specialists as well as for newcomers in this domain.

## CONTENT

The main focus will be on the integration of gas turbine theory and its industrial application in gas turbine development, while simultaneously adhering to operational and regulatory requirements. Building on the basics of the aircraft gas turbine technology, both steady state and transient performance of aero engines will be covered in detail, as well as the areas of controls, test, performance analysis and production. An expansive range of current and future aerospace propulsion technology and its application will be presented.

## ADMISSION REQUIREMENTS

For certification, at least a Bachelor's degree with technical background and a minimum of 3 years experience work is required, in the areas of aviation and machine engineering, or an equivalent field. Booking the seminar is also possible for participants who do not seek certification

## The 8 Day Certification Course in Aircraft Propulsion Technology will cover following main topics:

- Thermodynamic basics
- Performance maps
- Cycle selection
- Steady state performance
- Ratings
- Margins
- Trimming
- Transient performance
- Controls
- Instrumentation and testing
- Test analysis
- Monitoring

## The Course is divided in the following modules:

- Gas Turbine Fundamentals
- Operational Requirements
- Steady State Performance
- Transient Performance
- Controls
- Test and Analysis of Engine Performance
- Gas Turbine Development and Production

For a detailed information on the module contents see our Homepage

## KNOWLEDGE TRANSFER PROJECT

To adapt the content of the certification course to a specific task in Aircraft Propulsion Technology, the participant will work on a knowledge transfer paper. It will connect the content of different modules, providing practice for the participants in the interdisciplinary work of aircraft propulsion. The topic will be handed out during the seminar. The results of the Transferpaper will be presented on a workshop and expounded to the whole group so that the participants will learn from each other.

## CERTIFICATE AND TITLE

The content of the course are examined in a 2 hours written test. The grading will be based on the written test and on the transfer project with its presentation and defence. Upon successful completion the participant is awarded the title „Propulsion Systems Engineer (SHB)“ by the Steinbeis University Berlin. In addition 10 ECTS credit points are assigned.

## BENEFIT FOR THE PARTICIPANT

Specialists from the aerospace industry and research institutions, with extensive expertise and experience in the field of Aircraft Propulsion will share their detailed knowledge of the performance of aero engines.

- Access to extensive knowledge of the performance and operation of the gas turbine as a complex system.
- Gain the essential competences needed for working in a company or research institution of the aerospace industry
- Enhance your career opportunities through the Title “Propulsion Systems Engineer (SHB)”
- Be attested high theoretical and practical knowledge through the certificate of the SHB

## BENEFITS FOR THE COMPANY

A combination of extensive engineering know-how, theory and practical experience in gas turbine systems provides almost an ideal learning environment for the company's system engineers, tasked with the development of turbo aircraft engines.

## COSTS

### Offering price

**4.450,- Euro (plus tax)**

The fee includes lunch, coffee / tea and biscuits during breaks.

We also offer this certification course exclusively for your employees. Please call us for a individual offer.

## DATE

For detailed information about the next dates, program, application and registration please check [www.german-asa.de](http://www.german-asa.de)