
Short Course AIRCRAFT DESIGN 2011

06 – 10 June 2011



LOGOS



W·In·Q, e·V



HOMEPAGE

<http://www.flugzeugentwurf.de>

("Flugzeugentwurf" is German for "Aircraft Design") or

<http://AircraftDesign.ProfScholz.de>

AIM

The module gives an insight into the procedures and the multidisciplinary interactions of aircraft conceptual design. The process of iterative synthesis and analysis in aircraft design is illustrated. A software tool for preliminary sizing is demonstrated. Methods and data to enable case studies of subsonic aircraft design are provided.

TARGET
DELEGATES

The module is intended for graduated engineers, equivalent professionals and/or managers. It is likewise suitable for specialists in search of a broader perspective as for newcomers to the field. The course is also designed for aeronautical engineering students with an interest or for PhD students who gain a good foundation for their research.

LEARNING
OUTCOMES

On completion of the module, delegates will

- know aircraft design parameters and methods.
 - know the fundamental relationship of aircraft design parameters.
 - be able to size and design an aircraft to the detail as covered during the module.
 - have a capability to structure aircraft design activities systematically and efficiently.
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LEARNING
ENVIRONMENT

The module includes lectures, a tutorial, a team assignment, case studies and a company visit. Speakers are senior experts from industry and academia. A comprehensive set of course notes is provided.

MODULE
CONTENT

Introduction, development process, requirements, certification standards, aircraft configurations, preliminary sizing, fuselage and cabin conceptual design, wing design, empennage design, prediction of mass and CG-location, landing gear design and integration, drag prediction, design evaluation / DOC, special aspects of military aircraft design.

VENUE	Hamburg University of Applied Sciences and Airbus Operations GmbH.
MODULE LEADER	Prof. Dr.-Ing. Dieter Scholz, MSME, Department of Automotive and Aeronautical Engineering, Faculty of Engineering and Computer Science, Hamburg University of Applied Sciences, Berliner Tor 9, D-20099 Hamburg, Phone: +49-40-42875-8825 and +49-40-18119881, http://www.ProfScholz.de . E-Mail: info@ProfScholz.de ,
LECTURER	Dipl.-Ing. Hannes G. Ross (EADS, retired), Dipl.-Ing. Ole Böttger (Airbus), Dipl.-Ing. Bernd Trahmer (Airbus), Dipl.-Ing. Daniel Schiktanz (HAW Hamburg). More information on lecturers: See below.
MODULE PROGRAMME	See separate file / page.
HAW	With over 12000 students Hamburg University of Applied Sciences (Hochschule für Angewandte Wissenschaften Hamburg, HAW) is the second largest institute of higher education in the Hamburg region and one of the largest of its kind (University of Applied Sciences) in Germany. Founded in 1970, HAW's roots go back to the 18 th century. Its practice based teaching developed with industry, guarantees that participants can readily apply their knowledge. HAW aeronautical engineering graduates are well recognized and successfully engaged in all areas of aviation, nationally and internationally. The university has established a research focal point in aeronautical engineering. All research is done in close cooperation with industry. http://www.haw-hamburg.de .
TI	HAW's Faculty of Engineering and Computer Science (TI) has ordered the <i>Short Course Aircraft Design</i> from WINQ. http://www.haw-hamburg.de/ti.html .
WINQ	WINQ is the continuous education branch of Hamburg University of Applied Sciences. Since 1995 WINQ offers high-value seminars and courses at low prices. WINQ's programme includes short courses as well as and long term development for professionals. http://www.WINQ.de .
AERO	Aero is the "Aircraft Design and Systems Group" at HAW Hamburg. Aero's aim is to guide research assistants to cooperative dissertations and to conduct funded projects in research, development and teaching (short courses). Aero is organising the <i>Short Course Aircraft Design</i> on behalf of WINQ and TI. http://Aero.ProfScholz.de .

COST

Module fee: 1200 € (final price, no VAT) includes course notes and the programme as outlined on the last page with coffee, juice and biscuits/cookies and a dinner on HAW campus (transport, accommodation and further meals are not included).

Special rates are available for students – please ask!

APPLICATION

The application procedure is detailed on the Internet. Application is by transfer of the module fee to the account of WINQ.

Please send all your enquiries to Dipl.-Ing. Mihaela Niță via e-mail

Mihaela.Nita@haw-hamburg.de.

After applying by money transfer please send this information to Mr. Nita:

- Name (first, middle, last)
- Address (street, number, ZIP code, city, state, country)
- Date of birth *
- Place of birth *
- Nationality *
- E-Mail
- Phone number
- Organisation (company, university)

* This data is required for application to the Airbus visit.

LECTURER'S BACKGROUND

Prof. Dr.-Ing. Dieter Scholz, MSME

Professor at Hamburg University of Applied Sciences. Teaching and research in the area of Aircraft Design, Flight Mechanics, Aircraft Systems.

Dipl.-Ing. Hannes G. Ross

Project Engineer at VFW, MBB, EADS, today: IBR, Aeronautical Consulting. Projects: US-FRG VSTOL Tactical Fighter Study. F-111 Crew Escape Module, F-15 Concept and Definition Phase. Pannap, TKF. Preliminary Design of Eurofighter. Programme Leader X-31 for MBB/Dasa/EADS. Lecturer at Technical University Munich: Design Requirements for Military Aircraft.

Dipl.-Ing. Ole Böttger

Future projects engineer at Airbus in Germany since 1994. Overall design and follow up on A3XX. A380 competition studies in international project groups. Sketching, sizing, weight, drag and performance estimation. Discussion with component teams. Competition analysis with major focus on Boeing sonic cruiser and 787. Overall design A350 in international project group.

Dipl.-Ing. Bernd Trahmer

Future projects engineer at Airbus in Germany since 1991. Overall design and follow up on A3XX / VLCT (Airbus & Boeing). A380 competition studies in international project groups. Sketching, sizing, weight, drag and performance estimation. Discussion with component teams. Team leader of trans-national group "Future Project Concepts".

Dipl.-Ing. Daniel Schiktanz

Graduate student at Aircraft Design and Systems Group (Aero). The topic of his Master Thesis "Conceptual Design of a Medium Range Box Wing Aircraft" contributes to the research project Airport2030.

Dipl.-Ing. Mihaela Niță

Research assistant at Aircraft Design and Systems Group (Aero). PhD student at UPB, Bucharest. Research projects: CARISMA (finished) and Opera. Degree in Aeronautical Engineering. Thesis "Aircraft Design Studies Based on the ATR 72" prepared at Hamburg University of Applied Sciences.