



*Short Course Offering:*  
***Fundamentals of Flight -- A Practical  
Overview of Aeronautics***

- **WHEN & WHERE:** 28 & 29 October 2009 (8:00 – 4:30) at the Ohio Aerospace Institute (Across from GRC)
- **COURSE DESCRIPTION & MATERIALS:** This two-day course is all about airplanes, how they fly and why they look the way they do. From a very practical perspective, you'll be introduced to the key aspects of aeronautics, including: low and high-speed aerodynamics, stability and control, structures, and propulsion systems. Airplane performance and design tradeoffs are weaved throughout the discussion. A field trip to the flight-research hangar at GRC will reinforce the learning objectives.

You will be given a set of course notes and a copy of Aerodynamics for Naval Aviators, one of the best references available. 1.6 Continuing Education Units (CEUs) are awarded.

- **WHO SHOULD ATTEND:** Anyone working directly or indirectly in the field of aviation -- program managers, engineers, scientists, analysts, and technicians -- aircraft operational, test, logistical, and maintenance personnel. A building-block approach is used -- no prior knowledge is assumed. After seven years and nearly 2000 graduates from audiences across the Air Force, Navy, NASA, FAA, and industry, our instructors have earned a tremendous reputation for teaching fundamental aeronautics and propulsion. In our classroom, theory and practical application come alive! Here's what a couple graduates recently said:
  - *"I liked the ability of Wayne to relate the topic to each individual's point of view. Having worked at NASA most of my life, I knew some of these things -- but now it's easier to understand why."* Ohio Aerospace Institute, March 2009
  - *"Great intro to aeronautics. Good examples, great visual aids. Excellent ability to discuss and explain concepts. Can also delve into detail. The best course I've taken at GRC [Glenn Research Center] in eight years."* Ohio Aerospace Institute, March 2009
  - *"Wayne is great – he's engaging, knowledgeable, and always makes sure that we understand the material."* The Aero Institute, June 2009
  - *"I truly loved the entire class!"* The Aero Institute, June 2009
- **INSTRUCTOR:** Dr. Wayne F. Hallgren is a 1975 graduate of West Point, retired Air Force Colonel, and Vice President of Practical Aeronautics. He co-founded Hallgren Associates in 2002 -- now merged with Practical Aeronautics, he's continuing his passion for teaching and learning. Wayne taught for ten years in the Air Force Academy's Department of Aeronautics, including two years as Deputy Department Head -- on his departure, the cadets rated him the best instructor in the department. For five years, he was adjunct faculty to the Air Force Test Pilot School, where he twice won their "Outstanding Academic Instructor Award." Wayne is a member of the Experimental Aircraft Association's Speakers Bureau, an Associate Fellow of the American Institute of Aeronautics and Astronautics (AIAA), and co-author of an Introduction to Aircraft Flight Mechanics, winner of AIAA's 2006 Summerfield Book Award.
- **COST, REGISTRATION, & CANCELLATION POLICY:** \$872. For more information, visit [www.PracticalAero.com](http://www.PracticalAero.com). To register, contact [CHallgren@PracticalAero.com](mailto:CHallgren@PracticalAero.com) or call (970) 887-3155. Substitutions may be made at any time. Cancellations must be received 2 weeks prior to course start date and is subject to a \$50 fee. If you must cancel within the 2-week period, and do not have a substitute, you may forfeit the entire fee. A total refund will be issued should the course be canceled.