



WHITE EAGLE
AEROSPACE



Test and Evaluation of Avionics
and Weapons Systems

MAKE YOUR CAREER SOAR

Welcome

Thank you very much for your interest in White Eagle Aerospace. Since our founding in 2006, we have become a trusted leader in professional technical training and education throughout the aerospace industry.

As a fellow aerospace professional with nearly 40 years of industry experience, I understand the critical need for ongoing technical training in the workplace. White Eagle Aerospace was established in order to meet this pressing need.

For many years, we have recognized a looming crisis in the aerospace workforce. Throughout the industry, there is an increasingly bimodal distribution of aerospace professionals. One end of that distribution contains young, well trained, highly motivated, but very inexperienced professionals. The other end of that distribution involves individuals who have been around for a long time, have a great deal of experience and are on their way out of their chosen profession. This leaves a valley between the two.

Who is going to pass the baton to the upcoming generation of aerospace professionals? Where will they get their knowledge – knowledge that goes beyond academia and even graduate degrees? Much of what they need to know is not available in today's standard university curricula. What they need is:

- Specialized knowledge over a range of disciplines.
- Knowledge provided by an experienced expert in the field.
- Knowledge conveyed by a master instructor.

White Eagle Aerospace recognizes these issues and provides effective solutions for your workforce. We are pleased to present you with this brochure, which outlines our Test and Evaluation of Avionics and Weapons Systems (TEAWS) professional short course. Our team of industry experts and master instructors is dedicated to your success. Should you have any questions about our course catalog or desire more information on how we can help MAKE YOUR CAREER SOAR, please contact us today.

Best Regards,



John Terry White,
President/CEO
White Eagle Aerospace



About Our Company

Whether you are new to the aerospace industry or have years of professional experience, we are your provider-of-choice for expert technical training.

Acquiring key knowledge, critical lessons-learned and technical know-how are crucial ingredients for success in today's complex and highly competitive aerospace market. Our nationally-acclaimed short courses cover a wide range of highly useful technical subjects. Each course is delivered by a subject matter expert who is also an expert technical instructor.

We offer you comprehensive technical training in essential topics, with minimal time away from work – all at a price that fits today's tight training budgets.





Target Audience

The Test and Evaluation of Avionics and Weapons Systems (TEAWS) short course is intended for anyone involved in avionics and weapons system evaluation and testing, both in the air and on the ground.

The course provides aerospace professionals with a practical and comprehensive introduction to test and evaluation of aircraft systems including avionics, sensors and weapons systems. Course material is designed to meet the training needs of a diverse audience, ranging from less-experienced newcomers to seasoned flight testers who are transitioning from traditional performance and flying qualities testing into systems testing.

Delivered by a master instructor and subject matter expert with over 35 years of professional aerospace experience, this 5-day intensive training course will provide participants with invaluable real-world knowledge, enhanced understanding and improved competency in this key discipline. The depth and breadth of real-world practical experience the instructor brings to this classroom is an invaluable resource for all who are concerned with the test and evaluation of avionics and weapons systems.

Who Will Benefit

- Avionics Engineers
- Electrical Engineers
- Flight Test Engineers
- Aerospace Engineers
- Instrumentation Engineers
- Systems Engineers
- Flight Test Analysts
- Flight Test Crew Members
- Experimental Test Navigators
- Test Support Personnel
- Operations Research Analysts
- Data Reductions Specialists
- Project Managers
- Program Managers
- College Students

Group Discounts

White Eagle Aerospace is dedicated to meeting your organization's professional training needs. In order to better serve you, we offer special group discounts rates and on-site training. If you have a group of 15 or more participants, we will bring our nationally acclaimed TEAWS short course to your location at a discounted rate. Please contact us today to learn how we can help MAKE YOUR ORGANIZATION SOAR!





Course Description

The Test and Evaluation of Avionics and Weapons Systems (TEAWS) short course provides aerospace professionals with a practical and comprehensive introduction to test and evaluation of aircraft systems including avionics, sensors and weapons systems.

The course is designed to address the training needs of aerospace professionals with diverse backgrounds and varying levels of experience. Participants will gain the necessary theoretical and technical background and understanding needed to successfully participate in any aircraft systems flight test program upon return to their home organization.

Course material provides participants with a comprehensive overview of each major type of aircraft and weapons system. Instruction explores the basic system theory, design, technology and operational functionality for each of these major systems. The principles and techniques of aircraft systems flight testing are also emphasized.

The course also features invaluable lessons-learned in the field of flight test and evaluation, in addition to “war stories” that will enhance understanding of the course material. Students will participate in practical flight test exercises throughout the course. In addition, an extensive library of video clips will be used to illustrate test and evaluation principles taught during lectures and will facilitate student comprehension of the course material.

Key Course Topics

- Avionics Systems
- Communication Systems
- Navigational Aids and Systems
- Electro-Optical Sensor Systems
- Infrared Sensor Systems
- RADAR Systems
- Synthetic Aperture Radar Systems
- Electronic Warfare Systems
- Air-to-Air Weapons Systems
- Air-to-Ground Weapons Systems
- Data Acquisition
- INS & GPS
- Digital Data Bus
- Instrumentation
- Time, Space, Position Information
- Controls and Displays
- Circular Error Probable (CEP)
- Heads-Up Displays (HUDs)
- Helmet Mounted Displays (HMDs)
- Software Development
- MUX Bus
- Unmanned Aircraft Systems
- Representative Avionics Flight Test Program





Course Outline

The **Test and Evaluation of Avionics and Weapons Systems (TEAWS)** short course is an intensive 5-day training program that provides a maximum training experience to aerospace professionals with minimum time away from work.

Test and Evaluation of Avionics and Weapons Systems Module Overview

Day	Module(s)	Lecture Title
1	2-4	Avionics Overview
	5-7	Weapons Overview
	8	Flight Test Philosophy
2	9	TSPI
	10	Data & Instrumentation
	11	EMC/EMI
	12-13	Communications Testing
3	14-16	Navigation Systems Testing
	17-22	Electro-Optical and Infrared Testing
4	23-24	RADAR Testing
	25-28	RADAR Testing (continued)
5	29-32	Electronic Warfare Testing
	33-34	Air-to-Ground Weapons Testing
	35-36	Air-to-Air Weapons Testing
	37-38	Typical Flight Test Program
	39	Unmanned Air Vehicle Flight Testing





Information at a Glance

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Contact White Eagle Aerospace

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520-219-0526

Key Course Information

- **Instructor:** John L. Minor
- **Duration:** 5 instructional days; 40 instructional hours.
- **Textbook:** "Test and Evaluation of Aircraft Avionics and Weapon Systems", SciTech Publishing, 2010, Robert E. McShea.
- **Materials:** Textbook, all course slides in bound form and on DVD, two wall charts: (1) a RADAR fundamentals wall chart and (2) a weather effects on EO/IR/MMW sensors wall chart.
- **Cost:** \$1760 for single seat.
- **Registration:** Please visit our website to view the most current Course Calendar. To register for a scheduled course, simply complete the online registration form.
- **Group Discounts:** We offer special group discount rates and on-site training. For information, please contact Phyllis White at pjwhite@whiteeagleaerospace.com.





John L. Minor

Sensors & Systems Instructor

John L. Minor has 35 years of technical and operational experience. He is an internationally recognized expert on the subjects of military sensors, systems, and flight test. He is also a highly decorated technical instructor and lecturer.

During his career, Minor served on the technical staff of the Air Force Flight Test Center, the USAF Test Pilot School, Lockheed Martin and the Lockheed Skunk Works® and others. He began his career with the 9th Strategic Reconnaissance Wing as a sensor system specialist on the SR-71 and U-2 aircraft.

He has worked on a number of high-value military programs to include the Low Altitude Navigation and Targeting Infrared for Night (LANTIRN), the F/A-18D (RC) Advanced Tactical Air Reconnaissance System (ATARS), and the RQ-3A TIER III Minus (Darkstar) Low Observable (LO) Unmanned Air Vehicle (UAV), as well as numerous other classified programs.

Courses Offered

- **Fundamentals of Electro-Optics and Infrared (EO/IR) Sensors**
- **Fundamentals of Unmanned Air Vehicles (UAV), Missions & Systems**
- **Principles of Directed Infrared (IR) Countermeasures**
- **Test and Evaluation of Avionics and Weapons Systems**

As the USAF Test Pilot School's former Technical Director (2004-2008) and Systems Master Instructor (1999-2003), Minor was responsible for developing a state of the art curricula and teaching sensors, weapons, systems, electronic warfare, directed energy, and unmanned systems theory, operations, and flight test to the next generation of USAF Test Pilots, Electronic Warfare Officers, and Flight Test Engineers.

Minor has taught many short courses for Society of Flight Test Engineers, the Association of Old Crows (AOC), Technology Training Corporation, and has lectured throughout Europe to the Royal Aeronautical Engineering Society (RAeS) and Technical Universities.

Minor holds BSEE/MSEE degrees from the University of New Mexico/Air Force Institute of Technology. He has been honored with numerous awards and decorations to include: the 2012 Team Hill Spirit Award, the 2010 SFTE Kelly Johnson Award for Outstanding Achievement in the Field of Flight Test Engineering, the 412th Test Wing's Senior Leader of the Year Award, the SFTE Directors and Fellow Awards, the San Fernando Valley Engineers' Council Distinguished Engineering Project Achievement Award and the Engineers' Council Distinguished Engineering Life Achievement Award for his educational contributions to the Edwards AFB engineering community.

Most recently, Minor served as Chief of the Systems Engineering Division for the Ogden Air Logistics Center Engineering Directorate. He is currently Division Chief over Workforce Management and Development for over 1300 scientists and engineers at Hill Air Force Base.

Contact Information

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