



Runway Safety



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You must have an AOPA web account to join, renew, manage your subscriptions or manage your membership and to access Air Safety Institute courses or members-only content.

What You'll Learn

- Getting familiar with your taxi route
- Identifying airport hot spot areas
- Locating taxiways and runways on the ground and from the air
- How to resist the lure of cockpit distractions
- Decoding runway signage, markings, and lighting
- Best practices at towered and non-towered airports
- Why proper communication matters
- Appropriate use of aircraft lights

Visit Air Safety's Runway Safety course airsafetyinstitute.org/runwaysafety

Description

Where am I, where am I going? Whether departing from or arriving at an airport, cockpit distractions, confusing airport layouts, and miscommunications can spell out trouble. Add surface vehicles and airport blind spots to the mix and you've got a complex environment in which to operate. Improve your situational awareness and communication habits with practical, down-to-earth guidance offered in this course. Real-world scenarios and case studies underscore intricacies of airport surface operations.

View the Safety Spotlight for Runway Safety

<https://www.aopa.org/training-and-safety/air-safety-institute/safety-spotlights/runway-safety>



What You'll Learn

- Why grounding is best when the weather is uncooperative
- Interpreting pressure systems and fronts to project weather
- Temperature and dewpoint subtleties
- Using preflight and inflight weather sources
- Why IFR pilots can get trapped
- How to recognize pilot and flight risk factors
- Contingency planning
- What to do when things go wrong

Visit Air Safety's Weather Wise - VFR into IMC course
[airsafetyinstitute.org/vfr-into-imc](https://www.aopa.org/vfr-into-imc)

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Description

Don't get squeezed by low ceilings and poor visibility, which can trap an unsuspecting pilot quickly and jeopardize a safe outcome of the flight. This course covers the basic weather knowledge to avoid continued VFR flight into instrument meteorological conditions. It also tackles real-life issues that can influence your decision making in the future. Get the weather facts to guide you when the lines are blurred.

View the Safety Spotlight for VFR into IMC

<https://www.aopa.org/training-and-safety/air-safety-institute/safety-spotlights/vfr-into-imc>



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What You'll Learn

- How weather radar works
- Interpreting precipitation strength and gradient
- How composite and base reflectivity differ
- Identifying your datalink equipment reflectivity
- Using other radar sources for a second opinion
- How radar limitations affect you
- Using the big weather picture with datalink
- To make decisions for the best outcome of a flight

Visit Air Safety's Cockpit Weather course
airsafetyinstitute.org/ifrinsights_cockpitwx

Description

Uplift your datalink knowledge with practical advice on safely using datalink weather in flight. When you take this course, you'll see that datalink is not a crutch to make an un-flyable situation flyable, but rather an excellent tool supplementing the big weather picture to avoid dangerous weather. The course includes tutorials and interactive scenarios to connect datalink science with your knowledge of onboard avionics.

Aging Aircraft



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What You'll Learn

- How flight activity, improper maintenance, and damage accelerate aging
- Causes of metal fatigue and how to address the problem
- Effects of climate exposure
- Identifying exterior, interior, and engine compartment aging symptoms
- Detecting aircraft manufacturer-specific aging symptoms
- Why aircraft renovations can be beneficial
- Best aircraft maintenance practices
- Tips to reduce the effects of aircraft aging

Visit Air Safety's Aging Aircraft course airsafetyinstitute.org/agingaircraft

Description

Just as our lifestyle choices (diet, exercise, etc.) affect our true age, an aircraft's "lifestyle" also affects its true age. Whether you own or rent, you should consider factors that influence the aircraft's health and aging process, advancing its true age beyond its factory age. This course delves into causes of aircraft aging, offers suggestions for proactive inspection and maintenance practices, and discusses renovation opportunities that can extend an aircraft's useful life.

GPS for IFR



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What You'll Learn

- GPS IFR certification requirements
- Receiver familiarization recommendations
- Common GPS terms and receiver functions
- Entering an IFR flight plan
- GPS approach procedure structures
- Working with en route, terminal, and approach modes
- Avoiding common IFR GPS "gotchas"
- To benefit from and fly safely with GPS

Visit Air Safety's GPS for IFR course
airsafetyinstitute.org/gps_ifr

Description

Global Positioning System (GPS) units require study and practice to be used safely before launching into instrument meteorological conditions. Before you delve into an IFR receiver-specific course, start with this basic introduction for using GPS in the IFR system. The course offers practical knowledge, safety tips, and advice to avoid common mistakes that can foul an IFR flight.

GPS for VFR



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What You'll Learn

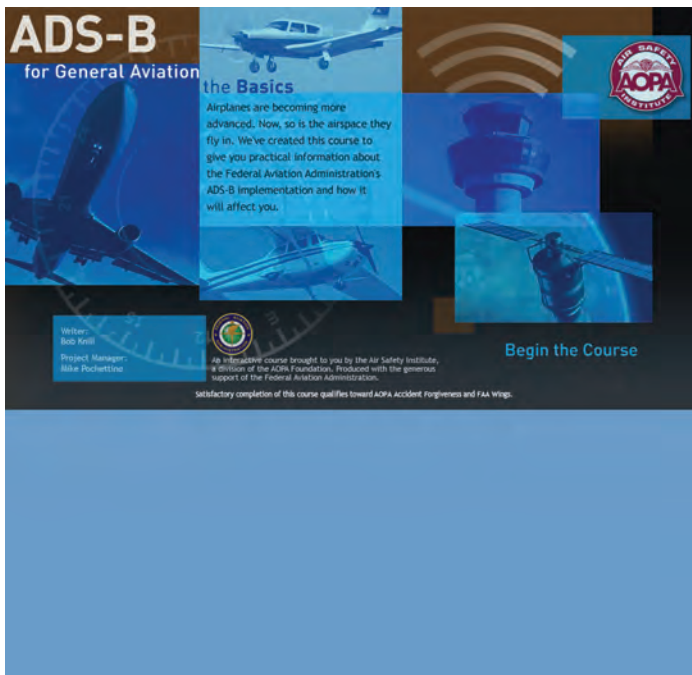
- Using GPS functions other than "Direct-To"
- How WAAS (Wide Area Augmentation System) works
- Handheld and panel-mount receiver training recommendations
- To flight plan with GPS
- How GPS can help in an emergency
- Using VFR waypoints
- How to avoid common GPS "gotchas"
- To benefit from and fly safely with GPS

Visit Air Safety's GPS for VFR course
airsafetyinstitute.org/gps_vfr

Description

Expand your flight plan and route beyond "Direct-To." While Global Positioning System (GPS) units require model-specific knowledge and practice, it also helps to have an elementary understanding of how the Global Positioning System works. This course introduces basic GPS concepts and use of GPS in VFR flying. It also offers safety tips and advice to avoid common mistakes.

ADS-B for General Aviation



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What You'll Learn

- How ADS-B data is transmitted and received
- Services each data link frequency supports
- Airspace and ADS-B Out requirements
- Benefits of ADS-B In services
- Available ADS-B In configurations
- Pros and Cons of ADS-B In options
- Which ADS-B solutions to consider
- Who to turn to for help

Visit Air Safety's ADS-B course
airsafetyinstitute.org/ads-b

Description

Confused about what Automatic Dependent Surveillance-Broadcast (ADS-B) technology is? Whether owning or renting get to the bottom of ADS-B, TIS-B, FIS-B, UAT, and 1090ES technologies. This course explains how ADS-B works, who is affected by its implementation, and the benefits of flying with ADS-B. It also provides equipment recommendations based on the type of flying you do.



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What You'll Learn

- How to prevent unauthorized access to hangars and aircraft
- Ways to protect and secure airport property
- How aircraft locks fit in
- Identifying and confirming suspicious activity
- How to report suspicious activity
- How to stay safe if you need to take action
- Your role in airport security
- Available security-related resources

Visit Air Safety's GA Security course
airsafetyinstitute.org/gasecurity

Description

As members of the general aviation community we all must help ensure the safety and security of our airports and aircraft. This course offers practical guidance to limit opportunities for criminals or potential terrorists seeking access to aircraft at airports, flight schools, and FBOs. Select one of four custom tracks (flight schools, aircraft owners, renter pilots, and FBOs and flying clubs) to fit your individual training needs.

Mountain Flying



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What You'll Learn

- Route planning essentials
- Effects of density altitude
- Essentials of backing up GPS with pilotage
- Why situational awareness skills are a must
- Realities of degraded climb performance limitations
- Evaluating mountain strip surfaces, slopes, and obstacles
- How mountain weather patterns work
- Effects of high-altitude on human physiology

Visit Air Safety's Mountain Flying course airsafetyinstitute.org/mountainFlying

Description

Flying across mountain passes and summits provides spectacular views and an exhilarating experience. But when weather patterns abruptly change—as happens in high terrain—there's little wiggle room for the uninitiated. This course introduces "flatlanders" to the principles of mountain flying and why the highlands demand respect. Discover why local terrain and weather patterns—together with aircraft performance—require your undivided attention in the mountains.

Caution: *Get a local mountain flying checkout with a qualified instructor before challenging the mountains alone.*

Public Benefit Flying



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What You'll Learn

- An overview of public benefit flying categories
- Volunteer pilot groups' recommended preflight considerations
- Personal minimums, currency, and proficiency strategies
- How to combat self-induced pressure
- Recognizing and managing risks unique to volunteer flying
- How to anticipating passengers' special needs
- Fuel and weather contingency planning in volunteer flying
- Best practices in volunteer flying decision making

Visit Air Safety's Public Benefit Flying course airsafetyinstitute.org/volunteerpilots

Description

You love to fly, and you like the idea of using your passion to help others. Public benefit flying makes that possible through the rewarding experience of patient and non-emergency medical and animal transport, disaster relief, educational flights, and environmental support. But it also demands a professional, safety-minded approach. This course helps you understand the additional flight planning considerations required beyond those for a regular cross-country flight. Explore and get involved.