



# Flight Instructor Refresher Course

*Sample*

We're excited that you're interested in our FIRC! This is just a small sample of one of our lessons.

Remember that you can join AceCFI with no risk -- If you are not satisfied with our course for any reason prior to graduating, we will give you a full refund.

## Lesson 3 Excerpts:

# Contributing to Safety

Risk management (RM) and risk intervention strategies are decision-making processes designed to systematically identify hazards, assess the degree of risk, and determine the best course of action. These processes begin with the identification of hazards, followed by assessments of the risks, analysis of the controls, making control decisions, using the controls, and monitoring the results.

It is your responsibility to instill these skills in your students and other pilots with whom you fly. However, to do so effectively, you must have the ability to clarify and present this knowledge in such a way that your students absorb the knowledge at a fundamental level so that when faced with a RM or risk intervention opportunity, they can respond quickly and accurately to mitigate or eliminate the risk.

At the same time, you must also be skilled in instilling those RM mechanisms in such a way as to make them integral parts of your students' safety mindsets, yet not instill unreasonable fear in those students who may still be developing their skill sets.

If you haven't picked up on it yet, our goal is to emphasize your role in enhancing safety throughout this entire FIRC program.

To get the ball rolling, check out this video about the true story of how Air Traffic Control helped an aircraft with an oil-covered windscreen:



[Click Here if the video above does not show](#)

[\(Video is unavailable in the course sample, since this is just a PDF document :\)](#)

# Why Focus on the Numbers?

Q: Why is it important for your students to understand accident trends for the general aviation industry?

A: Because understanding this information helps solidify a grasp on the “big picture” of aviation safety, and gives your students context to motivate their decisions.

For instance, consider the following two methods for teaching visual inspection of fuel tank levels-

METHOD 1: Instructor tells the student “You need to visually check your fuel tank levels before flight because” (pick one)-

- “It's probably a good idea”
- “I said so”
- “The 'aviation gods' say so”
- “The checklist calls for it”

**-OR-**

METHOD 2: Instructor ties accident data to practical application by telling the student "It is important to visually check your fuel tank levels before flight because about 40 GA accidents per year happen due to fuel starvation."

Obviously, Method 2 is guided by facts, and is much more effective and motivational. Your students will have a factual consequence on which to anchor their decisions instead of just a basic directive.



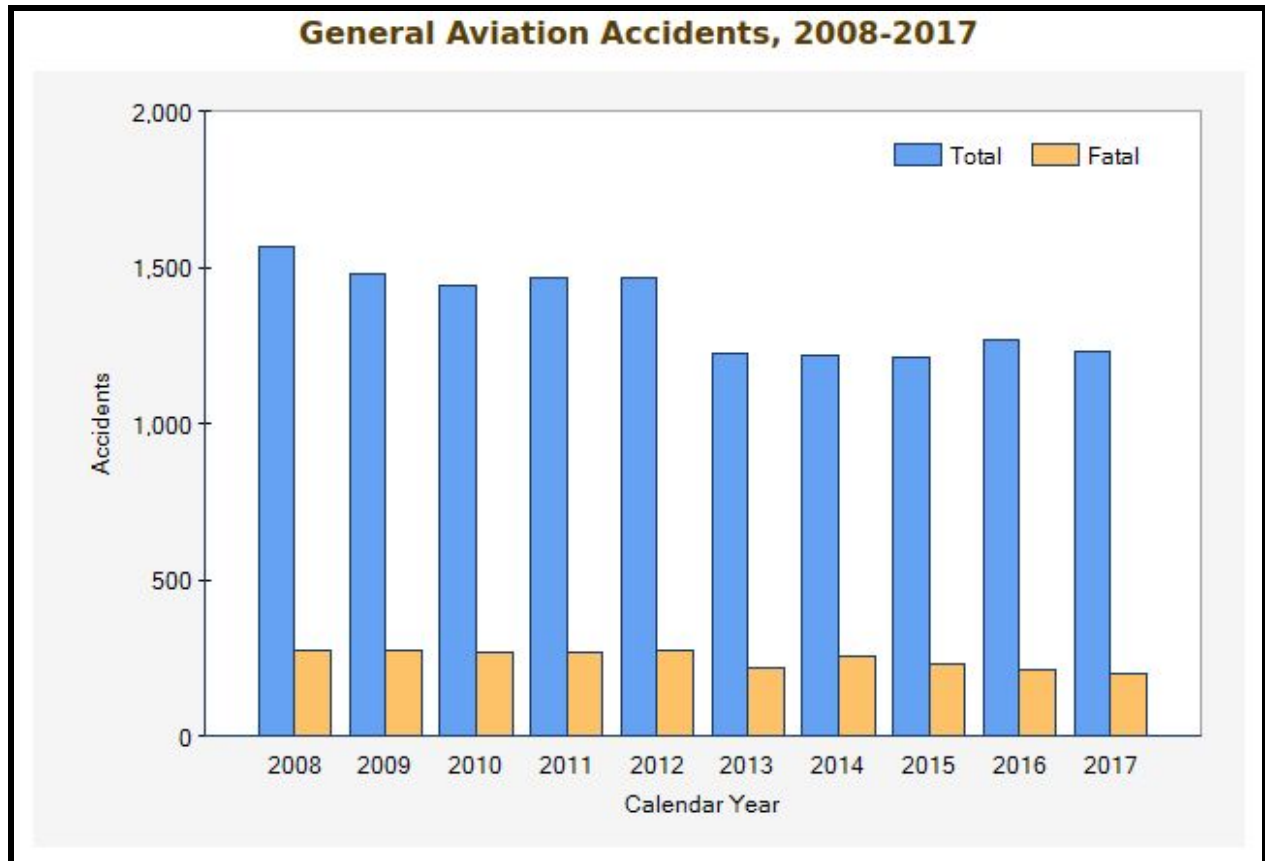
*Let's take a look at the NTSB's General Aviation accident statistics...*

Even though the accident *rates* for multi-engine and turbine aircraft are lower, the *lethality* is much higher

This is likely to the increased operating speeds of the aircraft, the subsequently higher kinetic energy at impact, and the increased likelihood of trauma related deaths as a result.

# General Aviation Accidents

Let's start off by looking at the NTSB's tally of General Aviation Accidents from 2008 – 2017 ([www.nts.gov/investigations](http://www.nts.gov/investigations)). Here's a glance at the total accidents during that time:



*Why is your accident data from way back in 2017?*

Because it's the most recent available! Complete yearly NTSB statistics take a few years to process and aggregate, partly because accident investigations can last a long time, and characterizing them can take even longer. This 2017 data is the most recent aggregate data published by the NTSB as of the latest update of this course. The same is true of the Nall Report presented later in this lesson. As the NTSB or Nall Report publish new aggregate data, we update this lesson!

*What insights would you teach your students about this data?*

When you present this data to your students, make sure they understand not only what the chart is presenting, but what it means to them as a pilot.

# General Aviation Accidents

Teach your students to look at the trends. You could point out to them the following insights from this data:

- Total GA Accidents have decreased from about 1,600 in 2008 to about 1,300 in 2017
- That's almost 4 accidents EVERY DAY!
- Fatal accidents show a similar, but slowly-decreasing, trend
- However, at about 250 fatal accidents per year, that equals 5 fatal accidents per week, or *one every business day* – quite a sobering fact!

There is quite a lot your student can glean from a simple chart like this. It's probably a safe bet that they never considered that **4 GA accidents happen every day in the US**. This is a great way to bring home the importance of checklists, discipline, and planning.

## Consider This:

It's unlikely that 1,300 GA pilots took off in 2017 thinking to themselves "I might get into an accident today..."

***What did those pilots do wrong that you can help your students do right?***





# Understanding the "Why"

According to the NTSB, although general aviation accounts for only half of the flight time in the United States, it accounts for 95% of ALL aviation accidents and 96% of ALL FATAL aviation accidents.

Segment	Accidents	Fatal Accidents	Fatalities
Part 121 Air Carriers	32	0	0
Part 135 Commuter and On-Demand Carriers	50	8	16
General Aviation	1233	203	331
<b>Total US Civil Aviation</b>	<b>1315</b>	<b>211</b>	<b>347</b>

Stated differently, this means that you are more than 24 times more likely to have a fatal accident flying in general aviation than in any other type of flying operation! As CFIs, we have our work cut out for us to bring that number down.

The challenges are to:

- Understand why
- Teach your students to understand why
- Teach methods and habits that will prevent pilots from making the mistakes that lead to accidents

Your student may have the perception that drastic skewing of accident rates toward GA is because airlines have more rules and experienced pilots. While those factors may be true, they don't tell the whole story. With appropriate training and a proper focus on the Culture of Safety, GA accidents are just as preventable! Let's dig a little deeper...



# Training Scenario

You have a commercial pilot student with over 800 hours of private flying experience in his Piper Arrow. He decides he wants to work his way up to CFI, so he hires you to take him through his commercial training. You notice on the first few flights with him that while he has very positive, confident control of his Arrow, he's also very aggressive in the traffic pattern. He consistently pushes the edge of bank angle, stall, and aircraft performance. It makes you a bit uneasy. How would you handle this situation?

- A. As long as he has positive control and doesn't go beyond any limits or regulations, then there's no need to say anything.
- B. Talk to him about your concern, and tie it to real data about the risks of Loss of Control.
- C. Help him examine his knowledge and proficiency of aircraft control by discussing/practicing Stalls, Spins, Basic Aircraft Control, and Angle of Attack.
- D. Tell him not to do it that way. It's wrong, dangerous, and not what you're used to.

**What would you do? And why?**