

FAASafety Human Factors for Pilots Course Catalog

The FAA Safety Team provides 10 Human Factors training modules in 9 online courses that are hosted on FAASafety.gov. This catalog describes and links to those courses.

Note: Modules 1 and 2 are combined in a single course.

You can enroll or preview any of the courses through the links below. Users can preview the courses without logging on to FAASafety.gov but, to complete a course and receive FAA **WINGS** Pilot Proficiency Program credit, pilots must be logged on to an active FAASafety.gov account.

Module 1 – Introduction



Module 1 – Introduction

If we want to improve the ways people – individually and collectively – conduct and support flight operations, we'll have to understand how humans think, what motivates them, what are their needs, fears, and biases. We'll need to know how intrinsic human qualities contribute to success – and failure. And, with that knowledge of human thought and behavior, we'll have to design aircraft and systems that support and leverage our human strengths while compensating for our weaknesses.

So here is where we begin the next leg of our journey to aviation excellence with an in-depth study of Human Factors – The Final Frontier.



- a set of shared attitudes, values, goals, and practices that characterizes an institution or organization
- the set of values, conventions, or social practices associated with a particular field, activity, or societal characteristic
- shared beliefs, attitudes, norms and values

Culture

The beliefs, attitudes, norms and values that people within an organization share are described as **Organizational Culture**. You can describe culture as, *"the way we do things around here"*.

Safety Culture is an essential part of organizational culture. It affects the way the organization manages safety and therefore, the ultimate effectiveness of its safety management system.

Module 2 – Safety Culture

Culture is a profound influence on how we view the world, and how we manage safety. Organizations, companies, schools, and families exert cultural pressure on individuals associated with them. Culture very much drives, 'the way we do things around here.' And yet many general aviation pilots feel that, because they don't fly for an aviation organization, they're not subject to cultural influences. But the truth is that we're all subject to cultural influences – good or bad. Module 2 discusses organizational and individual safety cultures.

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ALC-730

Human Factors for Pilots 01 & 2 - Introduction & Safety Culture

Free

FAASTeam

Basic WINGS

1 Credit for Basic Knowledge Topic 1



Human Factors for Pilots Module 3 - Human Performance

For more than a century, we've been producing and flying powered aircraft. Each new design flies more payload farther, faster, and more efficiently than those that have gone before. Few human endeavors have yielded such profound results so quickly.

We've been busy with pilots too. Human Factors knowledge has shown us how to excel in dealing with the physical, intellectual, and emotional challenges of flight.

Module 3 – Human Performance

Module 3 discusses human performance and how to excel in dealing with the physical, intellectual, and emotional challenges of flight.

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ALC-731

Human Factors for Pilots 03 - Human Performance

Free

FAASTeam

Basic WINGS

1 Credit for Basic Knowledge Topic 2



Human Factors for Pilots Module 4 - Communication

*'The single biggest problem in communication is
the illusion that it has taken place.'*

George Bernard Shaw

Module 4 – Communication

Effective communication is critical to safe flight operations. Module 4 discusses the many facets of communication. We discuss communication challenges and offer tips on how to communicate effectively.

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ALC-732

Human Factors for Pilots 04 - Communication

Free

FAASTeam

Basic WINGS

1 Credit for Basic Knowledge Topic 3



Human Factors for Pilots Module 5 - Teamwork

'The way a team plays as a whole determines its success. You may have the greatest bunch of individual stars in the world but if they don't play together, the club won't be worth a dime'

Babe Ruth

Module 5 – Teamwork

Teamwork is critical to safe and efficient flight operations. We pilots tend to be self-reliant, take-charge individuals who willingly take responsibility – and credit – for our accomplishments. That's good – but many of us see flying as a solo act rather than a team endeavor and that's not so good. The truth is; there is a huge network of individuals and services available to every pilot, and working with these assets as a team, we can fly to more places, more efficiently, and more safely than we can on our own. Module 5 shows us how best to work with and Captain our teams.

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ALC-825

Human Factors for Pilots 05 - Teamwork

Free

FAASTeam

Advanced WINGS

1 Credit for Advanced Knowledge Topic 1



Human Factors for Pilots Module 6 -Situational Awareness

'Situational Awareness involves an accurate understanding of what is going on around you, and what is likely to happen next.'

Module 6 – Situational Awareness

Situationally aware pilots have accurate understandings of what's going on around them and what's likely to happen next.

Module 6 offers sound advice on how to attain and maintain situational awareness.

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ALC-826

Human Factors for Pilots 06 - Situational Awareness

Free

FAASTeam

Advanced WINGS

1 Credit for Advanced Knowledge Topic 2



Human Factors for Pilots Module 7 - Decision Making

'Superior pilots use their superior judgment to avoid situations that would require the use of their superior skills.'

Module 7 – Decision-Making

If Decision-Making is defined as, ‘the act of choosing between alternatives under conditions of uncertainty,’

then Aeronautical Decision-Making is, ‘the act of choosing between alternatives under conditions of uncertainty while maintaining control in a dynamic and often hostile environment. Module 7 offers sound advice on how to make good decisions on the ground and in the air.

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ALC-827

Human Factors for Pilots 07 - Decision Making

Free

FAASTeam

Advanced WINGS

1 Credit for Advanced Knowledge Topic 2



Human Factors for Pilots Module 8 - Threat and Error Management

'People cannot easily avoid those actions they did not intend to commit.'

James Reason

Module 8 – Threat and Error Management

Threat and Error Management is a safety management approach that detects, recognizes, and manages Threats – such as adverse weather and, Errors – such as unclear communications. If not properly managed, Threats and Errors can lead to Undesired Aircraft States.

Module 8 is all about managing threats and errors so that they don't progress to undesired aircraft states.

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ALC-828

Human Factors for Pilots 08 - Threat and Error Management

Free

FAASTeam

Master WINGS

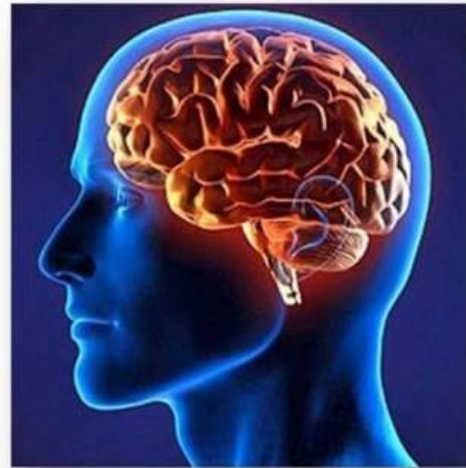
1 Credit for Master Knowledge Topic 1

Human Factors for Pilots Module 9

- Human Information Processing

'Understanding how thoughts work, how connections are made, how memory works, how we process information, how information is stored - it's all fascinating.'

Lisa Randall, theoretical physicist



Module 9 – Human Information Processing

In order for pilots to make decisions and act on them, they gather, assess, and prioritize information from their senses, knowledge bases, and life experiences. This fascinating module explains how humans process information and offers suggestions for effective information processing management.

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ALC-829

Human Factors for Pilots 09 - Human Information Processing

Free

FAASTeam

Master WINGS

1 Credit for Master Knowledge Topic 2



Human Factors for Pilots Module 10

- Design and Automation

'Technology and automation have advanced aviation safety. But they have also changed the way pilots interact with their aircraft and that has created some challenges.'

Module10 – Design and Automation

Technology and automation have and will continue to advance aviation safety, but they've also created some problems.

As with the aviation boom period following World War II, General Aviation aircraft instrumentation and automation are evolving rapidly, and pilots are struggling to keep up. Module 10 describes the challenges pilots face and how best to meet them.

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ALC-830

Human Factors for Pilots 10 - Design and Automation

Free

FAASTeam

Master WINGS

1 Credit for Master Knowledge Topic 2